

**CUMULATIVE (2020) WITHOUT  
PROJECT CONDITIONS  
(HCM METHODOLOGY)**

Cumulative Conditions (2020Mon Mar 30, 2009 18:34:37

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Scenario Report

Scenario: Cumulative Conditions (2020) without Project AM  
Command: Cumulative Conditions (2020) without Project AM  
Volume: Existing AM  
Geometry: Existing  
Impact Fee: Default Impact Fee  
Trip Generation: Approved Projects AM  
Trip Distribution: Project  
Paths: Default Path  
Routes: Default Route  
Configuration: Cumulative Conditions (2020) without Project

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Impact Analysis Report  
Level Of Service

Intersection		Base Del/ LOS Veh	V/ C	Future Del/ LOS Veh	V/ C	Change in	
# 1	Pacific Coast Hwy / Warner Ave	C	28.4 0.762	C	28.6 0.778	+ 0.156	D/V
# 2	Pacific Coast Hwy / Seapoint A	B	15.3 0.597	B	15.1 0.613	-0.180	D/V
# 3	Pacific Coast Hwy / Goldenwest	C	20.8 0.626	C	21.7 0.662	+ 0.903	D/V
# 4	Pacific Coast Hwy / 17th St	A	6.5 0.524	A	6.4 0.552	-0.084	D/V
# 5	Pacific Coast Hwy / 9th St	A	2.4 0.524	A	2.4 0.552	+ 0.009	D/V
# 6	Pacific Coast Hwy / 6th St	A	6.8 0.395	A	8.7 0.421	+ 1.878	D/V
# 7	Pacific Coast Hwy / Main St	B	14.8 0.513	B	14.6 0.538	-0.155	D/V
# 8	Pacific Coast Hwy / 1st St	B	14.9 0.441	B	18.0 0.456	+ 3.004	D/V
# 9	Pacific Coast Hwy / Huntington	A	7.3 0.557	A	8.4 0.587	+ 1.093	D/V
# 10	Pacific Coast Hwy / Beach Blvd	B	19.5 0.693	C	20.2 0.723	+ 0.630	D/V
# 11	Pacific Coast Hwy / Newland S	B	10.7 0.510	B	10.3 0.530	-0.414	D/V
# 12	Pacific Coast Hwy / Magnolia S	B	13.0 0.535	B	12.6 0.555	-0.483	D/V
# 13	Pacific Coast Hwy / Brookhurst	C	23.1 0.654	C	22.8 0.674	-0.349	D/V
# 14	Main St / Yorktown Ave	C	25.4 0.335	C	26.1 0.345	+ 0.692	D/V
# 15	Main St / 17 th St	B	13.8 0.229	B	12.6 0.247	-1.138	D/V
# 16	Main St / Adams Ave	B	14.6 0.365	B	14.6 0.400	-0.002	D/V
# 17	Main St / Walnut Ave	A	7.9 0.188	A	8.3 0.244	+ 0.056	V/C
# 18	Main St / Olive Ave	A	8.3 0.258	A	8.4 0.264	+ 0.007	V/C
# 19	Main St / 6th St	B	14.3 0.139	B	13.7 0.206	-0.591	D/V
# 20	Lake St / 6th St	A	8.1 0.116	A	8.1 0.117	+ 0.002	V/C
# 21	Lake St / Orange Ave	A	9.4 0.323	A	9.9 0.372	+ 0.050	V/C
# 22	1st St / Orange Ave & Atlanta	B	19.1 0.259	B	19.7 0.280	+ 0.565	D/V
# 23	Beach Blvd / Atlanta Ave	C	21.2 0.305	C	22.3 0.355	+ 1.047	D/V
# 24	Beach Blvd / Pacific View Ave	A	7.4 0.217	B	10.2 0.278	+ 2.854	D/V

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

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Intersection #1 Pacific Coast Hwy / Warner Ave

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Cycle (sec): 120 Critical Vol./Cap.(X): 0.778

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 28.6

Optimal Cycle: 103 Level Of Service: C

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Street Name: Pacific Coast Hwy Warner Ave

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected

Rights: Include Include Include Ovl

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 2 0 1 2 0 1 1 0 1 0 2 0 1 0 2

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Volume Module:

Base Vol: 30 1160 220 410 1150 40 20 190 30 290 50 600

Growth Adj: 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13

Initial Bse: 34 1307 248 462 1296 45 23 214 34 327 56 676

Added Vol: 0 53 2 0 57 0 0 0 0 2 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 34 1360 250 462 1353 45 23 214 34 329 56 676

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 34 1360 250 462 1353 45 23 214 34 329 56 676

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 34 1360 250 462 1353 45 23 214 34 329 56 676

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Volume: 34 1360 250 462 1353 45 23 214 34 329 56 676

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 2.00 1.94 0.06 1.00 0.86 0.14 2.00 1.00 2.00

Final Sat.: 1700 3400 1700 3400 3290 110 1700 1468 232 3400 1700 3400

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Capacity Analysis Module:

Vol/Sat: 0.02 0.40 0.15 0.14 0.41 0.41 0.01 0.15 0.15 0.10 0.03 0.20

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.03 0.51 0.51 0.17 0.66 0.66 0.05 0.19 0.19 0.12 0.26 0.43

Volume/Cap: 0.63 0.78 0.29 0.78 0.63 0.63 0.24 0.78 0.78 0.78 0.13 0.46

Delay/Veh: 78.3 25.9 16.8 53.8 12.6 12.6 55.8 58.0 58.0 59.9 34.4 24.4

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 78.3 25.9 16.8 53.8 12.6 12.6 55.8 58.0 58.0 59.9 34.4 24.4

LOS by Move: E C B D B B E E E E C C

HCM2kAvgQ: 2 21 5 10 15 15 1 11 11 8 2 9

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Note: Queue reported is the number of cars per lane.

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #2 Pacific Coast Hwy / Seapoint Ave  
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Cycle (sec): 120 Critical Vol./Cap.(X): 0.613  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 15.1  
Optimal Cycle: 59 Level Of Service: B  
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Street Name:	Pacific Coast Hwy				Seapoint Ave				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Protected		Protected		
Rights:	Include		Include		Include		Include		
Min. Green:	0	0	0	0	0	0	0	0	
Lanes:	0	0	1	1	0	1	0	0	

Volume Module:	Pacific Coast Hwy				Seapoint Ave			
Base Vol:	0	1110	30	80	1270	0	0	0
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	0	1251	34	90	1431	0	0	0
Added Vol:	0	55	0	0	60	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0
Initial Fut:	0	1306	34	90	1491	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1306	34	90	1491	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0
Reduced Vol:	0	1306	34	90	1491	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1306	34	90	1491	0	0	0

Saturation Flow Module:	Pacific Coast Hwy				Seapoint Ave			
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.95	0.05	1.00	2.00	0.00	0.00	0.00
Final Sat.:	0	3314	86	1700	3400	0	0	0

Capacity Analysis Module:	Pacific Coast Hwy				Seapoint Ave			
Vol/Sat:	0.00	0.39	0.39	0.05	0.44	0.00	0.00	0.00
Crit Moves:	****		****		****		****	
Green/Cycle:	0.00	0.64	0.64	0.09	0.73	0.00	0.00	0.00
Volume/Cap:	0.00	0.61	0.61	0.61	0.60	0.00	0.00	0.00
Delay/Veh:	0.0	13.1	13.1	60.3	8.2	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	13.1	13.1	60.3	8.2	0.0	0.0	0.0
LOS by Move:	A	B	B	E	A	A	A	A
HCM2kAvgQ:	0	15	15	4	13	0	0	0

Note: Queue reported is the number of cars per lane.  
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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

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Intersection #3 Pacific Coast Hwy / Goldenwest St

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Cycle (sec): 120 Critical Vol./Cap.(X): 0.662  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 21.7  
Optimal Cycle: 67 Level Of Service: C

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Street Name:	Pacific Coast Hwy				Goldenwest St			
Approach:	North Bound		South Bound		East Bound		West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected		Protected		Protected		Protected	
Rights:	Include		Include		Include		Include	
Min. Green:	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	0	2	0

Volume Module:

Base Vol:	20	970	140	140	1250	0	0	0	0	300	0	140
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	23	1093	158	158	1409	0	0	0	0	338	0	158
Added Vol:	0	55	20	0	60	0	0	0	0	30	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	1148	178	158	1469	0	0	0	0	368	0	158
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	23	1148	178	158	1469	0	0	0	0	368	0	158
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	23	1148	178	158	1469	0	0	0	0	368	0	158
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	23	1148	178	158	1469	0	0	0	0	368	0	158

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	1700	3400	1700	1700	3400	0	0	0	0	1700	0	1700

Capacity Analysis Module:

Vol/Sat:	0.01	0.34	0.10	0.09	0.43	0.00	0.00	0.00	0.00	0.22	0.00	0.09
Crit Moves:	****			****						****		
Green/Cycle:	0.02	0.53	0.53	0.15	0.65	0.00	0.00	0.00	0.00	0.33	0.00	0.33
Volume/Cap:	0.66	0.64	0.20	0.64	0.66	0.00	0.00	0.00	0.00	0.66	0.00	0.28
Delay/Veh:	97.7	21.0	15.1	53.9	13.5	0.0	0.0	0.0	0.0	37.6	0.0	30.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	97.7	21.0	15.1	53.9	13.5	0.0	0.0	0.0	0.0	37.6	0.0	30.2
LOS by Move:	F	C	B	D	B	A	A	A	A	D	A	C
HCM2kAvgQ:	2	15	3	7	17	0	0	0	0	12	0	4

Note: Queue reported is the number of cars per lane.



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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

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*****
Intersection #4 Pacific Coast Hwy / 17th St
*****
Cycle (sec):      120          Critical Vol./Cap.(X):      0.552
Loss Time (sec):    0 (Y+R=4.0 sec)  Average Delay (sec/veh):      6.4
Optimal Cycle:     51          Level Of Service:      A
*****
Street Name:      Pacific Coast Hwy          17th St
Approach:         North Bound      South Bound      East Bound      West Bound
Movement:         L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:          Protected      Protected      Protected      Protected
Rights:           Include      Include      Include      Include
Min. Green:       0 0 0 0 1      1 0 0 0 0      0 0 0 0 0      0 0 0 0 1
Lanes:           0 0 2 0 1      1 0 2 0 0      0 0 0 0 0      1 0 0 0 1
-----|-----|-----|-----|
Volume Module:
Base Vol:         0 1010      30      60 1420      0      0 0 0 0      80 0 80
Growth Adj:       1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13
Initial Bse:      0 1138      34      68 1600      0      0 0 0 0      90 0 90
Added Vol:        0 75      2      0 90      0      0 0 0 0      4 0 0
PasserByVol:      0 0      0      0 0      0      0 0 0 0      0 0 0
Initial Fut:      0 1213      36      68 1690      0      0 0 0 0      94 0 90
User Adj:         1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:          1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:       0 1213      36      68 1690      0      0 0 0 0      94 0 90
Reduct Vol:       0 0      0      0 0      0      0 0 0 0      0 0 0
Reduced Vol:      0 1213      36      68 1690      0      0 0 0 0      94 0 90
PCE Adj:          1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:          1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:      0 1213      36      68 1690      0      0 0 0 0      94 0 90
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:         1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment:       1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:           0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Final Sat.:       0 3400 1700 1700 3400 0 0 0 0 1700 0 1700
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:          0.00 0.36 0.02 0.04 0.50 0.00 0.00 0.00 0.00 0.06 0.00 0.05
Crit Moves:      ****          ****          ****
Green/Cycle:      0.00 0.81 0.81 0.09 0.90 0.00 0.00 0.00 0.00 0.10 0.00 0.10
Volume/Cap:       0.00 0.44 0.03 0.44 0.55 0.00 0.00 0.00 0.00 0.55 0.00 0.53
Delay/Veh:        0.0 3.5 2.2 53.7 1.4 0.0 0.0 0.0 0.0 55.3 0.0 54.4
User DelAdj:      1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:       0.0 3.5 2.2 53.7 1.4 0.0 0.0 0.0 0.0 55.3 0.0 54.4
LOS by Move:      A A A D A A A A A E A D
HCM2kAvgQ:        0 7 0 3 7 0 0 0 0 4 0 4
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Note: Queue reported is the number of cars per lane.

Cumulative Conditions (2020 Mon Mar 30, 2009 18:34:39

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #5 Pacific Coast Hwy / 9th St  
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Cycle (sec): 120 Critical Vol./Cap.(X): 0.552  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 2.4  
Optimal Cycle: 51 Level Of Service: A  
\*\*\*\*\*

Street Name:	Pacific Coast Hwy						9th St								
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Protected			Protected			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	0	0	2	0	1	1	0	2	0	0	0	0	0	0	1

Volume Module:

Base Vol:	0	1050	10	20	1500	0	0	0	0	40	0	20
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	0	1183	11	23	1690	0	0	0	0	45	0	23
Added Vol:	0	77	1	0	94	0	0	0	0	2	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1260	12	23	1784	0	0	0	0	47	0	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1260	12	23	1784	0	0	0	0	47	0	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1260	12	23	1784	0	0	0	0	47	0	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	1260	12	23	1784	0	0	0	0	47	0	23

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3400	1700	1700	3400	0	0	0	0	1700	0	1700

Capacity Analysis Module:

Vol/Sat:	0.00	0.37	0.01	0.01	0.52	0.00	0.00	0.00	0.00	0.03	0.00	0.01
Crit Moves:	****			****						****		
Green/Cycle:	0.00	0.92	0.92	0.03	0.95	0.00	0.00	0.00	0.00	0.05	0.00	0.05
Volume/Cap:	0.00	0.40	0.01	0.40	0.55	0.00	0.00	0.00	0.00	0.55	0.00	0.26
Delay/Veh:	0.0	0.7	0.4	61.6	0.5	0.0	0.0	0.0	0.0	63.3	0.0	56.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.7	0.4	61.6	0.5	0.0	0.0	0.0	0.0	63.3	0.0	56.5
LOS by Move:	A	A	A	E	A	A	A	A	A	E	A	E
HCM2kAvgQ:	0	3	0	1	4	0	0	0	0	3	0	1

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

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Intersection #6 Pacific Coast Hwy / 6th St

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Cycle (sec): 120 Critical Vol./Cap.(X): 0.421

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 8.7

Optimal Cycle: 32 Level Of Service: A

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Street Name: Pacific Coast Hwy 6th St

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 2 1 0 1 0 2 1 0 0 0 1 0 1 0

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Volume Module:

Base Vol: 20 940 20 40 1490 30 30 20 20 30 20 50

Growth Adj: 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13

Initial Bse: 23 1059 23 45 1679 34 34 23 23 34 23 56

Added Vol: 0 56 40 29 66 0 0 0 0 29 0 22

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 23 1115 63 74 1745 34 34 23 23 63 23 78

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 23 1115 63 74 1745 34 34 23 23 63 23 78

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 23 1115 63 74 1745 34 34 23 23 63 23 78

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Volume: 23 1115 63 74 1745 34 34 23 23 63 23 78

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.84 0.16 1.00 2.94 0.06 0.43 0.28 0.29 1.00 0.22 0.78

Final Sat.: 1700 4829 271 1700 5003 97 729 486 486 1700 380 1320

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.01 0.23 0.23 0.04 0.35 0.35 0.05 0.05 0.05 0.04 0.06 0.06

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.03 0.72 0.72 0.14 0.83 0.83 0.14 0.14 0.14 0.14 0.14 0.14

Volume/Cap: 0.42 0.32 0.32 0.32 0.42 0.42 0.33 0.33 0.33 0.26 0.42 0.42

Delay/Veh: 62.3 6.0 6.0 47.6 2.8 2.8 47.3 47.3 47.3 46.6 48.3 48.3

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 62.3 6.0 6.0 47.6 2.8 2.8 47.3 47.3 47.3 46.6 48.3 48.3

LOS by Move: E A A D A A D D D D D D

HCM2kAvgQ: 1 5 5 3 6 6 3 3 3 2 4 4

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #7 Pacific Coast Hwy / Main St

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.538  
Loss Time (sec): 30 (Y+R=4.0 sec) Average Delay (sec/veh): 14.6  
Optimal Cycle: 80 Level Of Service: B

\*\*\*\*\*

Street Name:	Pacific Coast Hwy						Main St								
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected			Protected			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	1	0	3	0	1	1	0	3	0	0	0	0	0	0	1

Volume Module:

Base Vol:	10	910	60	40	1500	0	0	0	0	50	0	70
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	11	1025	68	45	1690	0	0	0	0	56	0	79
Added Vol:	0	96	0	0	96	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	1121	68	45	1786	0	0	0	0	56	0	79
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	1121	68	45	1786	0	0	0	0	56	0	79
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	1121	68	45	1786	0	0	0	0	56	0	79
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	11	1121	68	45	1786	0	0	0	0	56	0	79

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	1700	5100	1700	1700	5100	0	0	0	0	1700	0	1700

Capacity Analysis Module:

Vol/Sat:	0.01	0.22	0.04	0.03	0.35	0.00	0.00	0.00	0.00	0.03	0.00	0.05
Crit Moves:	****			****								****
Green/Cycle:	0.01	0.59	0.59	0.07	0.65	0.00	0.00	0.00	0.00	0.09	0.00	0.09
Volume/Cap:	0.54	0.37	0.07	0.37	0.54	0.00	0.00	0.00	0.00	0.38	0.00	0.54
Delay/Veh:	83.9	12.9	10.4	55.1	11.4	0.0	0.0	0.0	0.0	53.5	0.0	56.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	83.9	12.9	10.4	55.1	11.4	0.0	0.0	0.0	0.0	53.5	0.0	56.5
LOS by Move:	F	B	B	E	B	A	A	A	A	D	A	E
HCM2kAvgQ:	1	7	1	2	12	0	0	0	0	2	0	4

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #8 Pacific Coast Hwy / 1st St

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.456

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 18.0

Optimal Cycle: 42 Level Of Service: B

\*\*\*\*\*

Street Name: Pacific Coast Hwy 1st St

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 1 0 0 2

-----|-----|-----|-----|

Volume Module:

Base Vol: 40 800 50 40 1380 60 70 40 30 100 80 110

Growth Adj: 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13

Initial Bse: 45 901 56 45 1555 68 79 45 34 113 90 124

Added Vol: 0 40 44 66 29 0 0 0 0 32 0 56

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 45 941 100 111 1584 68 79 45 34 145 90 180

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 45 941 100 111 1584 68 79 45 34 145 90 180

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 45 941 100 111 1584 68 79 45 34 145 90 180

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Volume: 45 941 100 111 1584 68 79 45 34 145 90 180

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.71 0.29 1.00 2.88 0.12 1.27 0.73 1.00 1.23 0.77 2.00

Final Sat.: 1700 4609 491 1700 4891 209 2164 1236 1700 2095 1305 3400

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Capacity Analysis Module:

Vol/Sat: 0.03 0.20 0.20 0.07 0.32 0.32 0.04 0.04 0.02 0.07 0.07 0.05

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.06 0.58 0.58 0.19 0.71 0.71 0.08 0.08 0.08 0.15 0.15 0.15

Volume/Cap: 0.46 0.35 0.35 0.35 0.46 0.46 0.46 0.46 0.25 0.46 0.46 0.35

Delay/Veh: 58.0 13.2 13.2 43.2 7.5 7.5 53.9 53.9 52.8 47.0 47.0 46.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 58.0 13.2 13.2 43.2 7.5 7.5 53.9 53.9 52.8 47.0 47.0 46.0

LOS by Move: E B B D A A D D D D D D

HCM2kAvgQ: 2 7 7 4 9 9 3 3 1 4 4 3

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #9 Pacific Coast Hwy / Huntington St

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.587

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 8.4

Optimal Cycle: 45 Level Of Service: A

\*\*\*\*\*

Street Name: Pacific Coast Hwy Huntington St

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 2 0 1 1 0 2 0 1 0 1 0 1 0 0 1

-----|-----|-----|-----|

Volume Module:

Base Vol: 50 830 60 30 1460 10 10 20 40 30 60 20

Growth Adj: 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13

Initial Bse: 56 935 68 34 1645 11 11 23 45 34 68 23

Added Vol: 0 83 95 0 62 0 0 0 0 75 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 56 1018 163 34 1707 11 11 23 45 109 68 23

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 56 1018 163 34 1707 11 11 23 45 109 68 23

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 56 1018 163 34 1707 11 11 23 45 109 68 23

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Volume: 56 1018 163 34 1707 11 11 23 45 109 68 23

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 0.33 0.67 1.00 1.23 0.77 1.00

Final Sat.: 1700 3400 1700 1700 3400 1700 567 1133 1700 2097 1303 1700

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Capacity Analysis Module:

Vol/Sat: 0.03 0.30 0.10 0.02 0.50 0.01 0.02 0.02 0.03 0.05 0.05 0.01

Crit Moves: \*\*\*\* \*\*\*\*

Green/Cycle: 0.06 0.85 0.85 0.06 0.86 0.86 0.09 0.09 0.09 0.09 0.09 0.09

Volume/Cap: 0.59 0.35 0.11 0.35 0.59 0.01 0.23 0.23 0.30 0.59 0.59 0.15

Delay/Veh: 64.4 1.9 1.4 56.7 2.8 1.3 51.2 51.2 51.9 55.6 55.6 51.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 64.4 1.9 1.4 56.7 2.8 1.3 51.2 51.2 51.9 55.6 55.6 51.0

LOS by Move: E A A E A A D D D E E D

HCM2kAvgQ: 3 4 1 2 10 0 1 1 2 4 4 1

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #10 Pacific Coast Hwy / Beach Blvd

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.723

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 20.2

Optimal Cycle: 82 Level Of Service: C

\*\*\*\*\*

Street Name:	Pacific Coast Hwy						Beach Blvd						
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Ignore			Ignore			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1	0	2	0	1	1	0	2	0	1	2	0	1

Volume Module:

Base Vol:	20	860	220	100	1520	30	20	50	10	480	80	160
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	23	969	248	113	1713	34	23	56	11	541	90	180
Added Vol:	0	128	0	35	102	0	0	0	0	0	0	50
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	1097	248	148	1815	34	23	56	11	541	90	230
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	23	1097	248	148	1815	34	23	56	0	541	90	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	23	1097	248	148	1815	34	23	56	0	541	90	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Volume:	23	1097	248	148	1815	34	23	56	0	541	90	0

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	2.00	1.00	1.00
Final Sat.:	1700	3400	1700	1700	3400	1700	1700	3400	1700	3400	1700	1700

Capacity Analysis Module:

Vol/Sat:	0.01	0.32	0.15	0.09	0.53	0.02	0.01	0.02	0.00	0.16	0.05	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.02	0.60	0.60	0.16	0.74	0.74	0.05	0.02	0.00	0.22	0.19	0.00
Volume/Cap:	0.72	0.54	0.24	0.54	0.72	0.03	0.27	0.72	0.00	0.72	0.27	0.00
Delay/Veh:	117.1	14.7	11.6	48.5	9.9	4.2	56.8	86.3	0.0	46.9	41.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	117.1	14.7	11.6	48.5	9.9	4.2	56.8	86.3	0.0	46.9	41.6	0.0
LOS by Move:	F	B	B	D	A	A	E	F	A	D	D	A
HCM2kAvgQ:	2	12	4	6	19	0	1	2	0	11	3	0

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #11 Pacific Coast Hwy / Newland St

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.530

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 10.3

Optimal Cycle: 49 Level Of Service: B

\*\*\*\*\*

Street Name: Pacific Coast Hwy Newland St

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 3 0 1 1 0 3 0 1 0 1 0 0 0 1

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Volume Module:

Base Vol: 0 930 30 60 1800 0 10 10 0 160 0 110

Growth Adj: 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13

Initial Bse: 0 1048 34 68 2028 0 11 11 0 180 0 124

Added Vol: 0 128 0 0 102 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 1176 34 68 2130 0 11 11 0 180 0 124

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 0 1176 34 68 2130 0 11 11 0 180 0 124

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 1176 34 68 2130 0 11 11 0 180 0 124

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Volume: 0 1176 34 68 2130 0 11 11 0 180 0 124

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 3.00 1.00 1.00 3.00 1.00 1.00 1.00 0.00 1.00 0.00 1.00

Final Sat.: 1700 5100 1700 1700 5100 1700 1700 1700 0 1700 0 1700

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Capacity Analysis Module:

Vol/Sat: 0.00 0.23 0.02 0.04 0.42 0.00 0.01 0.01 0.00 0.11 0.00 0.07

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.00 0.67 0.67 0.12 0.79 0.00 0.01 0.01 0.00 0.20 0.00 0.20

Volume/Cap: 0.00 0.34 0.03 0.34 0.53 0.00 0.53 0.53 0.00 0.53 0.00 0.36

Delay/Veh: 0.0 8.5 6.6 49.9 4.8 0.0 71.1 71.1 0.0 44.6 0.0 42.1

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 8.5 6.6 49.9 4.8 0.0 71.1 71.1 0.0 44.6 0.0 42.1

LOS by Move: A A A D A A E E A D A D

HCM2kAvgQ: 0 6 0 3 10 0 1 1 0 6 0 4

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #12 Pacific Coast Hwy / Magnolia St

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.555

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 12.6

Optimal Cycle: 51 Level Of Service: B

\*\*\*\*\*

Street Name:	Pacific Coast Hwy						Magnolia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	3	0	1	0	1	0	0	1	0	0

Volume Module:

Base Vol:	20	840	50	80	1850	30	10	20	10	150	20	140
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	23	947	56	90	2085	34	11	23	11	169	23	158
Added Vol:	0	128	0	0	102	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	1075	56	90	2187	34	11	23	11	169	23	158
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	23	1075	56	90	2187	34	11	23	11	169	23	158
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	23	1075	56	90	2187	34	11	23	11	169	23	158
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	23	1075	56	90	2187	34	11	23	11	169	23	158

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	0.67	0.33	1.76	0.24	1.00
Final Sat.:	1700	5100	1700	1700	5100	1700	1700	1133	567	3000	400	1700

Capacity Analysis Module:

Vol/Sat:	0.01	0.21	0.03	0.05	0.43	0.02	0.01	0.02	0.02	0.06	0.06	0.09
Crit Moves:	****			****			****					****
Green/Cycle:	0.02	0.64	0.64	0.16	0.77	0.77	0.04	0.04	0.04	0.17	0.17	0.17
Volume/Cap:	0.55	0.33	0.05	0.33	0.55	0.03	0.18	0.55	0.55	0.34	0.34	0.55
Delay/Veh:	73.7	10.1	8.2	45.4	5.6	3.2	57.6	67.6	67.6	44.4	44.4	48.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	73.7	10.1	8.2	45.4	5.6	3.2	57.6	67.6	67.6	44.4	44.4	48.3
LOS by Move:	E	B	A	D	A	A	E	E	E	D	D	D
HCM2kAvgQ:	2	6	1	3	11	0	1	2	2	3	3	6

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

Cumulative Conditions (2020Mon Mar 30, 2009 18:34:39

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #13 Pacific Coast Hwy / Brookhurst St

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.674

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 22.8

Optimal Cycle: 70 Level Of Service: C

\*\*\*\*\*

Street Name:	Pacific Coast Hwy						Brookhurst St						
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1	0	3	0	1	1	0	3	0	1	1	0	1

Volume Module:

Base Vol:	10	750	210	150	1880	0	10	10	10	660	10	150
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	11	845	237	169	2118	0	11	11	11	744	11	169
Added Vol:	0	128	0	0	102	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	973	237	169	2220	0	11	11	11	744	11	169
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	973	237	169	2220	0	11	11	11	744	11	169
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	973	237	169	2220	0	11	11	11	744	11	169
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	11	973	237	169	2220	0	11	11	11	744	11	169

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	0.50	0.50	2.00	1.00	1.00
Final Sat.:	1700	5100	1700	1700	5100	1700	1700	850	850	3400	1700	1700

Capacity Analysis Module:

Vol/Sat:	0.01	0.19	0.14	0.10	0.44	0.00	0.01	0.01	0.01	0.22	0.01	0.10
Crit Moves:	***				***		***			***		
Green/Cycle:	0.01	0.43	0.43	0.22	0.65	0.00	0.02	0.02	0.02	0.32	0.32	0.32
Volume/Cap:	0.67	0.44	0.32	0.44	0.67	0.00	0.31	0.67	0.67	0.67	0.02	0.31
Delay/Veh:	133.0	24.1	22.8	40.9	13.9	0.0	62.6	101	101.4	36.7	27.7	30.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	133.0	24.1	22.8	40.9	13.9	0.0	62.6	101	101.4	36.7	27.7	30.9
LOS by Move:	F	C	C	D	B	A	E	F	F	D	C	C
HCM2kAvgQ:	1	8	6	6	17	0	1	2	2	13	0	5

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

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Cumulative Conditions (2020 Mon Mar 30, 2009 18:34:39

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

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*****
Intersection #14 Main St / Yorktown Ave
*****
Cycle (sec):      100          Critical Vol./Cap.(X):      0.345
Loss Time (sec):    0 (Y+R=4.0 sec)  Average Delay (sec/veh):      26.1
Optimal Cycle:      35          Level Of Service:      C
*****
Street Name:      Main St          Yorktown Ave
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:      Protected      Protected      Protected      Protected
Rights:      Include      Include      Include      Include
Min. Green:      0 0 0 0      0 0 0 0      0 0 0 0      0 0 0 0
Lanes:      1 0 2 0 1      2 0 2 0 1      1 0 2 0 1      1 0 2 0 1
-----|-----|-----|-----|
Volume Module:
Base Vol:      110 360 30 110 330 40 60 340 140 40 340 90
Growth Adj:  1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13
Initial Bse:  124 406 34 124 372 45 68 383 158 45 383 101
Added Vol:    0 27 23 0 32 0 0 0 0 31 2 0
PasserByVol:  0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut:  124 433 57 124 404 45 68 383 158 76 385 101
User Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:      1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:   124 433 57 124 404 45 68 383 158 76 385 101
Reduct Vol:   0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol:  124 433 57 124 404 45 68 383 158 76 385 101
PCE Adj:      1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:      1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:  124 433 57 124 404 45 68 383 158 76 385 101
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:     1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment:   1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:        1.00 2.00 1.00 2.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.:   1700 3400 1700 3400 3400 1700 1700 3400 1700 1700 3400 1700
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:      0.07 0.13 0.03 0.04 0.12 0.03 0.04 0.11 0.09 0.04 0.11 0.06
Crit Moves:   ****          ****          ****          ****
Green/Cycle:  0.21 0.43 0.43 0.12 0.34 0.34 0.12 0.32 0.32 0.13 0.33 0.33
Volume/Cap:   0.34 0.29 0.08 0.29 0.34 0.08 0.34 0.35 0.29 0.35 0.34 0.18
Delay/Veh:    34.1 18.6 16.7 40.2 24.6 22.1 41.8 26.4 26.0 41.0 25.6 24.1
User DelAdj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:   34.1 18.6 16.7 40.2 24.6 22.1 41.8 26.4 26.0 41.0 25.6 24.1
LOS by Move:   C  B  B  D  C  C  D  C  C  D  C  C
HCM2kAvgQ:    3  4  1  2  5  1  2  5  4  2  5  2
*****

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Note: Queue reported is the number of cars per lane.

Cumulative Conditions (2020Mon Mar 30, 2009 18:34:39

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

```

*****
Intersection #15 Main St / 17 th St
*****
Cycle (sec):          100          Critical Vol./Cap.(X):          0.247
Loss Time (sec):      0 (Y+R=4.0 sec)  Average Delay (sec/veh):          12.6
Optimal Cycle:        19          Level Of Service:          B
*****
Street Name:          Main St          17th St
Approach:             North Bound      South Bound      East Bound      West Bound
Movement:             L - T - R        L - T - R        L - T - R        L - T - R
-----|-----|-----|-----|
Control:              Permitted        Permitted        Permitted        Permitted
Rights:               Include          Include          Include          Include
Min. Green:           0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes:                1 0 2 0 1 0 0 1 1 1 1 0 0 0 0 0
-----|-----|-----|-----|
Volume Module:
Base Vol:             0 290 20 0 350 160 170 10 0 0 0 0
Growth Adj:           1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13
Initial Bse:          0 327 23 0 394 180 192 11 0 0 0 0
Added Vol:            0 50 0 0 63 0 0 0 0 0 0 0
PasserByVol:          0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut:          0 377 23 0 457 180 192 11 0 0 0 0
User Adj:             1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:              1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:           0 377 23 0 457 180 192 11 0 0 0 0
Reduct Vol:           0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol:          0 377 23 0 457 180 192 11 0 0 0 0
PCE Adj:              1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:              1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:          0 377 23 0 457 180 192 11 0 0 0 0
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:             1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment:           1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:                1.00 2.00 1.00 0.00 2.00 1.00 1.00 1.00 0.00 1.00 0.00 0.00
Final Sat.:           1700 3400 1700 0 3400 1700 1700 1700 0 1700 0 0
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:              0.00 0.11 0.01 0.00 0.13 0.11 0.11 0.01 0.00 0.00 0.00 0.00
Crit Moves:          ****
Green/Cycle:          0.00 0.54 0.54 0.00 0.54 0.54 0.46 0.46 0.00 0.00 0.00 0.00
Volume/Cap:           0.00 0.20 0.02 0.00 0.25 0.19 0.25 0.01 0.00 0.00 0.00 0.00
Delay/Veh:            0.0 11.7 10.5 0.0 12.1 11.7 16.9 14.9 0.0 0.0 0.0 0.0
User DelAdj:          1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:           0.0 11.7 10.5 0.0 12.1 11.7 16.9 14.9 0.0 0.0 0.0 0.0
LOS by Move:          A B B A B B B B A A A A
HCM2kAvgQ:            0 3 0 0 4 3 4 0 0 0 0 0
*****

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Note: Queue reported is the number of cars per lane.



Cumulative Conditions (2020 Mon Mar 30, 2009 18:34:39

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

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*****
Intersection #16 Main St / Adams Ave
*****
Cycle (sec):          100          Critical Vol./Cap.(X):          0.400
Loss Time (sec):      0 (Y+R=4.0 sec) Average Delay (sec/veh):      14.6
Optimal Cycle:        24          Level Of Service:          B
*****
Street Name:          Main St          Adams Ave
Approach:             North Bound      South Bound      East Bound      West Bound
Movement:             L - T - R        L - T - R        L - T - R        L - T - R
-----|-----|-----|-----|-----|
Control:              Permitted        Permitted        Permitted        Permitted
Rights:               Include          Include          Include          Include
Min. Green:           0    0    0        0    0    0        0    0    0        0    0    0
Lanes:                1  0  1  0  1        1  0  1  0  1        0  1  0  0  1        0  1  0  0  1
-----|-----|-----|-----|-----|
Volume Module:
Base Vol:             20   300   100       50   280   30       10   230   10       60   190   30
Growth Adj:           1.13 1.13  1.13       1.13 1.13  1.13       1.13 1.13  1.13       1.13 1.13  1.13
Initial Bse:          23   338   113       56   316   34       11   259   11       68   214   34
Added Vol:            0    50    8         0    63    0         0    0    0         11    0    0
PasserByVol:          0    0    0         0    0    0         0    0    0         0    0    0
Initial Fut:          23   388   121       56   379   34       11   259   11       79   214   34
User Adj:             1.00 1.00  1.00       1.00 1.00  1.00       1.00 1.00  1.00       1.00 1.00  1.00
PHF Adj:              1.00 1.00  1.00       1.00 1.00  1.00       1.00 1.00  1.00       1.00 1.00  1.00
PHF Volume:           23   388   121       56   379   34       11   259   11       79   214   34
Reduct Vol:           0    0    0         0    0    0         0    0    0         0    0    0
Reduced Vol:          23   388   121       56   379   34       11   259   11       79   214   34
PCE Adj:              1.00 1.00  1.00       1.00 1.00  1.00       1.00 1.00  1.00       1.00 1.00  1.00
MLF Adj:              1.00 1.00  1.00       1.00 1.00  1.00       1.00 1.00  1.00       1.00 1.00  1.00
FinalVolume:          23   388   121       56   379   34       11   259   11       79   214   34
-----|-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:             1700 1700  1700       1700 1700  1700       1700 1700  1700       1700 1700  1700
Adjustment:           1.00 1.00  1.00       1.00 1.00  1.00       1.00 1.00  1.00       1.00 1.00  1.00
Lanes:                1.00 1.00  1.00       1.00 1.00  1.00       0.04 0.96  1.00       0.27 0.73  1.00
Final Sat.:           1700 1700  1700       1700 1700  1700       71 1629  1700       457 1243  1700
-----|-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:              0.01 0.23  0.07       0.03 0.22  0.02       0.16 0.16  0.01       0.17 0.17  0.02
Crit Moves:          ****                      ****
Green/Cycle:          0.57 0.57  0.57       0.57 0.57  0.57       0.43 0.43  0.43       0.43 0.43  0.43
Volume/Cap:           0.02 0.40  0.12       0.06 0.39  0.03       0.37 0.37  0.02       0.40 0.40  0.05
Delay/Veh:            9.4 12.3  10.0       9.6 12.2  9.4       19.6 19.6  16.4       20.0 20.0  16.6
User DelAdj:          1.00 1.00  1.00       1.00 1.00  1.00       1.00 1.00  1.00       1.00 1.00  1.00
AdjDel/Veh:           9.4 12.3  10.0       9.6 12.2  9.4       19.6 19.6  16.4       20.0 20.0  16.6
LOS by Move:          A    B    B         A    B    A         B    B    B         B    B    B
HCM2kAvgQ:            0    7    2         1    6    0         6    6    0         6    6    1
*****

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Note: Queue reported is the number of cars per lane.

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Cumulative Conditions (2020 Mon Mar 30, 2009 18:34:39

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #17 Main St / Walnut Ave

\*\*\*\*\*

Cycle (sec): 0 Critical Vol./Cap.(X): 0.244  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 8.3  
Optimal Cycle: 0 Level Of Service: A

\*\*\*\*\*

Street Name:	Main St						Walnut Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:

Base Vol:	10	70	20	30	90	20	10	20	10	10	10	30
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	11	79	23	34	101	23	11	23	11	11	11	34
Added Vol:	0	45	0	9	33	0	0	0	0	0	0	12
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	124	23	43	134	23	11	23	11	11	11	46
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	124	23	43	134	23	11	23	11	11	11	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	124	23	43	134	23	11	23	11	11	11	46
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	11	124	23	43	134	23	11	23	11	11	11	46

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.07	0.79	0.14	0.21	0.68	0.11	0.25	0.50	0.25	0.16	0.16	0.68
Final Sat.:	58	641	117	175	551	92	181	361	181	127	127	517

Capacity Analysis Module:

Vol/Sat:	0.19	0.19	0.19	0.24	0.24	0.24	0.06	0.06	0.06	0.09	0.09	0.09
Crit Moves:	****			****			****			****		
Delay/Veh:	8.3	8.3	8.3	8.6	8.6	8.6	7.9	7.9	7.9	7.7	7.7	7.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.3	8.3	8.3	8.6	8.6	8.6	7.9	7.9	7.9	7.7	7.7	7.7
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	8.3			8.6			7.9			7.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	8.3			8.6			7.9			7.7		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.2	0.2	0.2	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1

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Note: Queue reported is the number of cars per lane.



Cumulative Conditions (2020 Mon Mar 30, 2009 18:34:39

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Detailed Computation Report  
2000 HCM 4-Way Stop Method  
Future Volume Alternative

\*\*\*\*\*

Intersection #17 Main St / Walnut Ave

\*\*\*\*\*

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R

Time Period: 0.25 hour

HevVeh:	0%	0%	0%	0%
---------	----	----	----	----

Alpha Value: 0.01

GroupType:	1	1	1	1
P[C1]:	0.66	0.70	0.57	0.58
P[C2]:	0.21	0.16	0.05	0.04
P[C3]:	0.10	0.11	0.31	0.32
P[C4]:	0.03	0.03	0.07	0.06
P[C5]:	0.00	0.00	0.00	0.00
Padj[C1]:	0.005	0.005	0.009	0.009
Padj[C2]:	-0.000	0.000	0.004	0.004
Padj[C3]:	-0.003	-0.003	-0.008	-0.009
Padj[C4]:	-0.002	-0.002	-0.004	-0.004
Padj[C5]:	-0.000	-0.000	-0.000	-0.000

Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.071	-0.025	-0.100	-0.369
Volume:	158	200	45	68
Capacity:	816	818	723	771
DegOfUtil:	0.19	0.24	0.06	0.08
DepHeadway:	4.28	4.29	4.63	4.34
ServiceTime:	2.3	2.3	2.6	2.3
Delay:	8.3	8.6	7.9	7.7
Queue:	0.2	0.3	0.1	0.1

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	8.3	8.6	7.9	7.7
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	8.3	8.6	7.9	7.7
LOS by Appr:	A	A	A	A
OverallDel:			8.3	
OverallLOS:			A	

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report  
2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #18 Main St / Olive Ave

\*\*\*\*\*

Cycle (sec): 0 Critical Vol./Cap.(X): 0.264  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 8.4  
Optimal Cycle: 0 Level Of Service: A

\*\*\*\*\*

Street Name:	Main St						Olive Ave								
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0			

Volume Module:

Base Vol:	10	80	30	70	100	20	10	20	10	10	10	20
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	11	90	34	79	113	23	11	23	11	11	11	23
Added Vol:	0	1	0	0	2	0	0	9	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	91	34	79	115	23	11	32	11	11	23	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	91	34	79	115	23	11	32	11	11	23	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	91	34	79	115	23	11	32	11	11	23	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	11	91	34	79	115	23	11	32	11	11	23	23

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.08	0.67	0.25	0.37	0.53	0.10	0.21	0.58	0.21	0.20	0.41	0.39
Final Sat.:	68	551	204	298	434	85	151	423	151	147	303	293

Capacity Analysis Module:

Vol/Sat:	0.17	0.17	0.17	0.26	0.26	0.26	0.07	0.07	0.07	0.08	0.08	0.08
Crit Moves:	****			****			****			****		
Delay/Veh:	8.1	8.1	8.1	8.8	8.8	8.8	8.0	8.0	8.0	7.9	7.9	7.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.1	8.1	8.1	8.8	8.8	8.8	8.0	8.0	8.0	7.9	7.9	7.9
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	8.1			8.8			8.0			7.9		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	8.1			8.8			8.0			7.9		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.2	0.2	0.2	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

Cumulative Conditions (2020 Mon Mar 30, 2009 18:34:39

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Detailed Computation Report  
2000 HCM 4-Way Stop Method  
Future Volume Alternative

\*\*\*\*\*  
Intersection #18 Main St / Olive Ave  
\*\*\*\*\*

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period:	0.25 hour			
HevVeh:	0%	0%	0%	0%
Alpha Value:	0.01			

GroupType:	1	1	1	1
P[C1]:	0.64	0.73	0.58	0.58
P[C2]:	0.22	0.14	0.04	0.04
P[C3]:	0.10	0.11	0.31	0.31
P[C4]:	0.04	0.03	0.06	0.06
P[C5]:	0.00	0.00	0.00	0.00
Padj[C1]:	0.005	0.004	0.009	0.009
Padj[C2]:	-0.000	0.000	0.004	0.004
Padj[C3]:	-0.003	-0.003	-0.009	-0.009
Padj[C4]:	-0.002	-0.002	-0.004	-0.004
Padj[C5]:	-0.000	-0.000	-0.000	-0.000

Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.132	0.010	-0.083	-0.197
Volume:	136	216	54	57
Capacity:	824	817	725	743
DegOfUtil:	0.16	0.26	0.07	0.07
DepHeadway:	4.24	4.30	4.63	4.51
ServiceTime:	2.2	2.3	2.6	2.5
Delay:	8.1	8.8	8.0	7.9
Queue:	0.2	0.3	0.1	0.1

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	8.1	8.8	8.0	7.9
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	8.1	8.8	8.0	7.9
LOS by Appr:	A	A	A	A
OverallDel:			8.4	
OverallLOS:			A	

Cumulative Conditions (2020 Mon Mar 30, 2009 18:34:39

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #19 Main St / 6th St  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.206  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 13.7  
Optimal Cycle: 18 Level Of Service: B  
\*\*\*\*\*

Street Name:	Main St						6th St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	0	1	0	0

Volume Module:	Main St			Main St			6th St			6th St		
Base Vol:	0	80	30	10	130	30	40	40	10	50	50	10
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	0	90	34	11	146	34	45	45	11	56	56	11
Added Vol:	0	16	0	0	18	61	45	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	106	34	11	164	95	90	45	11	56	56	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	106	34	11	164	95	90	45	11	56	56	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	106	34	11	164	95	90	45	11	56	56	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	106	34	11	164	95	90	45	11	56	56	11

Saturation Flow Module:	Main St			Main St			6th St			6th St		
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.76	0.24	1.00	0.63	0.37	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1700	1289	411	1700	1078	622	1700	1700	1700	1700	1700	1700

Capacity Analysis Module:	Main St			Main St			6th St			6th St		
Vol/Sat:	0.00	0.08	0.08	0.01	0.15	0.15	0.05	0.03	0.01	0.03	0.03	0.01
Crit Moves:				****			****					
Green/Cycle:	0.00	0.74	0.74	0.74	0.74	0.74	0.26	0.26	0.26	0.26	0.26	0.26
Volume/Cap:	0.00	0.11	0.11	0.01	0.21	0.21	0.21	0.10	0.03	0.13	0.13	0.03
Delay/Veh:	0.0	3.7	3.7	3.3	4.0	4.0	29.3	28.4	27.7	28.6	28.6	27.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	3.7	3.7	3.3	4.0	4.0	29.3	28.4	27.7	28.6	28.6	27.7
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	0	1	1	0	2	2	2	1	0	1	1	0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report  
2000 HCM 4-Way Stop Method (Future Volume Alternative)

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*****
Intersection #20 Lake St / 6th St
*****
Cycle (sec):          0          Critical Vol./Cap.(X):          0.117
Loss Time (sec):      0 (Y+R=4.0 sec)  Average Delay (sec/veh):          8.1
Optimal Cycle:        0          Level Of Service:          A
*****
Street Name:          Lake St          6th St
Approach:             North Bound      South Bound      East Bound      West Bound
Movement:             L - T - R        L - T - R        L - T - R        L - T - R
-----|-----|-----|-----|
Control:              Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:               Include          Include          Include          Include
Min. Green:           0 0 0 0          0 0 0 0          0 0 0 0          0 0 0 0
Lanes:                1 0 0 1 0        1 0 1 0 1        0 1 0 0 1        0 1 0 0 1
-----|-----|-----|-----|
Volume Module:
Base Vol:             0 20 0 40 0 50    40 30 0 0 70 10
Growth Adj:           1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13
Initial Bse:          0 23 0 45 0 56    45 34 0 0 79 11
Added Vol:            0 6 0 0 14 0        0 0 0 0 0 0
PasserByVol:          0 0 0 0 0 0        0 0 0 0 0 0
Initial Fut:          0 29 0 45 14 56    45 34 0 0 79 11
User Adj:             1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:              1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:           0 29 0 45 14 56    45 34 0 0 79 11
Reduct Vol:           0 0 0 0 0 0        0 0 0 0 0 0
Reduced Vol:          0 29 0 45 14 56    45 34 0 0 79 11
PCE Adj:              1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:              1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:          0 29 0 45 14 56    45 34 0 0 79 11
-----|-----|-----|-----|
Saturation Flow Module:
Adjustment:           1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:                1.00 1.00 0.00 1.00 1.00 1.00 0.57 0.43 1.00 0.00 1.00 1.00
Final Sat.:           630 691 0 632 693 801 385 289 824 0 713 826
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:              0.00 0.04 xxxx 0.07 0.02 0.07 0.12 0.12 0.00 xxxx 0.11 0.01
Crit Moves:           ****          ****          ****          ****
Delay/Veh:            0.0 7.9 0.0 8.6 7.8 7.3 8.6 8.6 0.0 0.0 8.2 7.0
Delay Adj:            1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:           0.0 7.9 0.0 8.6 7.8 7.3 8.6 8.6 0.0 0.0 8.2 7.0
LOS by Move:          * A * A A A A A A * * A A
ApproachDel:          7.9 7.9 8.6 8.1
Delay Adj:            1.00 1.00 1.00 1.00
ApprAdjDel:           7.9 7.9 8.6 8.1
LOS by Appr:          A A A A
AllWayAvgQ:           0.0 0.0 0.0 0.1 0.0 0.1 0.1 0.1 0.0 0.1 0.1 0.0
*****
Note: Queue reported is the number of cars per lane.

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Detailed Computation Report  
2000 HCM 4-Way Stop Method  
Future Volume Alternative

\*\*\*\*\*  
Intersection #20 Lake St / 6th St  
\*\*\*\*\*

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R

Time Period: 0.25 hour

HevVeh:	0%	0%	0%	0%
---------	----	----	----	----

Alpha Value: 0.01

GroupType:	5	6	5	5
P[C1]:	0.66	0.75	0.72	0.72
P[C2]:	0.12	0.03	0.10	0.09
P[C3]:	0.18	0.20	0.16	0.16
P[C4]:	0.04	0.02	0.03	0.03
P[C5]:	0.00	0.00	0.00	0.00
Padj[C1]:	0.006	0.005	0.005	0.005
Padj[C2]:	0.002	0.002	0.001	0.001
Padj[C3]:	-0.005	-0.006	-0.004	-0.004
Padj[C4]:	-0.003	-0.001	-0.002	-0.002
Padj[C5]:	-0.000	-0.000	-0.000	-0.000

Lanes:	L1	L2	L1	L2	L1	L2	L1	L2
LaneType:	LEFT	RTTHRU	LEFT	RITE	RITE	LTTHRU	RITE	LTTHRU
HeadwayAdj:	0.500	0.000	0.500	-0.700	-0.700	0.286	-0.700	0.000
Volume:	0	29	45	56	0	79	11	79
Capacity:	630	691	632	801	824	673	826	713
DegOfUtil:	0.00	0.04	0.07	0.07	0.00	0.11	0.01	0.11
DepHeadway:	5.52	5.02	5.53	4.33	4.22	5.21	4.22	4.92
ServiceTime:	3.2	2.7	3.2	2.0	1.9	2.9	1.9	2.6
Delay:	8.2	7.9	8.6	7.3	6.9	8.6	7.0	8.2
Queue:	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.1

Lane:	L3	L3	L3	L3
LaneType:	NOLANE	THRU	NOLANE	NOLANE
HeadwayAdj:	xx.xxx	0.000	xx.xxx	xx.xxx
Volume:	xxxxxx	14	xxxxxx	xxxxxx
Capacity:	xxxxxx	693	xxxxxx	xxxxxx
DegOfUtil:	x.xx	0.02	x.xx	x.xx
DepHeadway:	xx.xx	5.03	xx.xx	xx.xx
ServiceTime:	xx.x	2.7	xx.x	xx.x
Delay:	xxx.x	7.8	xxx.x	xxx.x
Queue:	xxx.x	0.0	xxx.x	xxx.x

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.9	7.9	8.6	8.1
Delay Adj:	1.00	1.00	1.00	1.00



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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

ApprAdjDel:	7.9	7.9	8.6	8.1
LOS by Appr:	A	A	A	A
OverallDel:			8.1	
OverallLOS:			A	

Cumulative Conditions (2020 Mon Mar 30, 2009 18:34:40

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #21 Lake St / Orange Ave

\*\*\*\*\*

Cycle (sec): 0 Critical Vol./Cap.(X): 0.372  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 9.9  
Optimal Cycle: 0 Level Of Service: A  
\*\*\*\*\*

Street Name: Lake St Orange Ave

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Stop Sign Stop Sign Stop Sign Stop Sign

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 10 20 10 40 60 10 10 180 20 30 160 30

Growth Adj: 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13

Initial Bse: 11 23 11 45 68 11 11 203 23 34 180 34

Added Vol: 0 0 0 14 0 0 0 24 0 0 27 6

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 11 23 11 59 68 11 11 227 23 34 207 40

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 11 23 11 59 68 11 11 227 23 34 207 40

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 11 23 11 59 68 11 11 227 23 34 207 40

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Volume: 11 23 11 59 68 11 11 227 23 34 207 40

-----|-----|-----|-----|

Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.25 0.50 0.25 0.43 0.49 0.08 0.04 0.87 0.09 0.12 0.74 0.14

Final Sat.: 154 309 154 273 313 52 32 650 65 91 557 107

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.07 0.07 0.07 0.22 0.22 0.22 0.35 0.35 0.35 0.37 0.37 0.37

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*

Delay/Veh: 8.6 8.6 8.6 9.5 9.5 9.5 10.0 10.0 10.0 10.2 10.2 10.2

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 8.6 8.6 8.6 9.5 9.5 9.5 10.0 10.0 10.0 10.2 10.2 10.2

LOS by Move: A A A A A A B B B B B B

ApproachDel: 8.6 9.5 10.0 10.2

Delay Adj: 1.00 1.00 1.00 1.00

ApprAdjDel: 8.6 9.5 10.0 10.2

LOS by Appr: A A B B

AllWayAvgQ: 0.1 0.1 0.1 0.2 0.2 0.2 0.5 0.5 0.5 0.5 0.5 0.5

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

Cumulative Conditions (2020Mon Mar 30, 2009 18:34:40

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Detailed Computation Report  
2000 HCM 4-Way Stop Method  
Future Volume Alternative

\*\*\*\*\*  
Intersection #21 Lake St / Orange Ave  
\*\*\*\*\*

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R

Time Period: 0.25 hour

HevVeh:	0%	0%	0%	0%
---------	----	----	----	----

Alpha Value: 0.01

GroupType:	1	1	1	1
P[C1]:	0.34	0.40	0.48	0.50
P[C2]:	0.08	0.03	0.27	0.25
P[C3]:	0.36	0.42	0.15	0.16
P[C4]:	0.19	0.14	0.09	0.09
P[C5]:	0.02	0.01	0.00	0.00
Padj[C1]:	0.015	0.013	0.009	0.009
Padj[C2]:	0.007	0.007	0.001	0.001
Padj[C3]:	-0.009	-0.011	-0.004	-0.004
Padj[C4]:	-0.011	-0.009	-0.006	-0.005
Padj[C5]:	-0.002	-0.001	-0.000	-0.000

Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.100	0.037	-0.043	-0.061
Volume:	45	138	261	281
Capacity:	618	638	747	754
DegOfUtil:	0.07	0.20	0.34	0.36
DepHeadway:	5.22	5.21	4.66	4.62
ServiceTime:	3.2	3.2	2.7	2.6
Delay:	8.6	9.5	10.0	10.2
Queue:	0.1	0.2	0.5	0.5

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	8.6	9.5	10.0	10.2
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	8.6	9.5	10.0	10.2
LOS by Appr:	A	A	B	B
OverallDel:			9.9	
OverallLOS:			A	

Cumulative Conditions (2020 Mon Mar 30, 2009 18:34:40

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #22 1st St / Orange Ave & Atlanta Ave

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.280  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 19.7  
Optimal Cycle: 26 Level Of Service: B  
\*\*\*\*\*

Street Name:	1st St						Orange Ave & Atlanta Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	0	1	0	1	0	1	1	0	1

Volume Module:	1st St NB			1st St SB			Orange Ave EB			Atlanta Ave WB		
Base Vol:	40	0	90	10	10	0	0	130	30	220	150	0
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	45	0	101	11	11	0	0	146	34	248	169	0
Added Vol:	17	0	5	0	0	0	0	12	26	13	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	62	0	106	11	11	0	0	158	60	261	185	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	62	0	106	11	11	0	0	158	60	261	185	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	62	0	106	11	11	0	0	158	60	261	185	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	62	0	106	11	11	0	0	158	60	261	185	0

Saturation Flow Module:	1st St NB			1st St SB			Orange Ave EB			Atlanta Ave WB		
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	1.00	0.50	0.50	0.00	1.00	1.45	0.55	1.00	1.00	0.00
Final Sat.:	1700	0	1700	850	850	0	1700	2469	931	1700	1700	0

Capacity Analysis Module:	1st St NB			1st St SB			Orange Ave EB			Atlanta Ave WB		
Vol/Sat:	0.04	0.00	0.06	0.01	0.01	0.00	0.00	0.06	0.06	0.15	0.11	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.22	0.00	0.22	0.22	0.22	0.00	0.00	0.23	0.23	0.55	0.78	0.00
Volume/Cap:	0.16	0.00	0.28	0.06	0.06	0.00	0.00	0.28	0.28	0.28	0.14	0.00
Delay/Veh:	31.5	0.0	32.6	30.6	30.6	0.0	0.0	32.0	32.0	12.3	2.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.5	0.0	32.6	30.6	30.6	0.0	0.0	32.0	32.0	12.3	2.8	0.0
LOS by Move:	C	A	C	C	C	A	A	C	C	B	A	A
HCM2kAvgQ:	2	0	3	1	1	0	0	3	3	4	1	0

Note: Queue reported is the number of cars per lane.

Cumulative Conditions (2020 Mon Mar 30, 2009 18:34:40

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

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*****
Intersection #23 Beach Blvd / Atlanta Ave
*****
Cycle (sec):          120          Critical Vol./Cap.(X):          0.355
Loss Time (sec):       0 (Y+R=4.0 sec)  Average Delay (sec/veh):          22.3
Optimal Cycle:         29          Level Of Service:          C
*****
Street Name:          Beach Blvd          Atlanta Ave
Approach:             North Bound          South Bound          East Bound          West Bound
Movement:             L - T - R          L - T - R          L - T - R          L - T - R
-----|-----|-----|-----|
Control:              Permitted          Permitted          Protected          Protected
Rights:               Include          Include          Include          Include
Min. Green:           0  0  0  0          0  0  0  0          0  0  0  0          0  0  0  0
Lanes:                0  1  2  1  0          1  0  2  1  0          1  0  2  0  1          1  0  2  0  1
-----|-----|-----|-----|
Volume Module:
Base Vol:             10  320          60  170  610  110          50  140  30  60  250  170
Growth Adj:           1.13 1.13  1.13  1.13 1.13  1.13  1.13 1.13  1.13  1.13 1.13  1.13
Initial Bse:          11  361          68  192  687  124          56  158  34  68  282  192
Added Vol:             0  86          8  0  126  21          36  35  0  11  43  0
PasserByVol:          0  0          0  0  0  0          0  0  0  0  0  0
Initial Fut:          11  447          76  192  813  145          92  193  34  79  325  192
User Adj:             1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:              1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:           11  447          76  192  813  145          92  193  34  79  325  192
Reduct Vol:           0  0          0  0  0  0          0  0  0  0  0  0
Reduced Vol:          11  447          76  192  813  145          92  193  34  79  325  192
PCE Adj:              1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:              1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:          11  447          76  192  813  145          92  193  34  79  325  192
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:             1700 1700  1700  1700 1700  1700 1700  1700  1700 1700  1700
Adjustment:           1.00 1.00  1.00  1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:                0.08 3.35  0.57  1.00 2.55  0.45  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:          144 5693  964  1700 4329  771  1700 3400  1700  1700 3400  1700
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:              0.08 0.08  0.08  0.11 0.19  0.19  0.05 0.06  0.02  0.05 0.10  0.11
Crit Moves:           ****          ****
Green/Cycle:          0.53 0.53  0.53  0.53 0.53  0.53  0.15 0.26  0.26  0.21 0.32  0.32
Volume/Cap:           0.15 0.15  0.15  0.21 0.35  0.35  0.35 0.22  0.08  0.22 0.30  0.35
Delay/Veh:            14.4 14.4  14.4  15.1 16.4  16.4  46.3 35.0  33.7  39.4 31.1  31.9
User DelAdj:          1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:           14.4 14.4  14.4  15.1 16.4  16.4  46.3 35.0  33.7  39.4 31.1  31.9
LOS by Move:          B  B  B  B  B  B  D  D  C  D  C  C
HCM2kAvgQ:            2  2  2  4  7  7  3  3  1  2  5  5
*****

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Note: Queue reported is the number of cars per lane.

Cumulative Conditions (2020 Mon Mar 30, 2009 18:34:40

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project AM

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #24 Beach Blvd / Pacific View Ave

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.278

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 10.2

Optimal Cycle: 32 Level Of Service: B

\*\*\*\*\*

Street Name: Beach Blvd Pacific View Ave

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 3 0 0 1 0 2 1 0 1 0 0 0 0 0

Volume Module:

Base Vol: 30 350 0 0 680 60 50 0 30 0 0 0

Growth Adj: 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13

Initial Bse: 34 394 0 0 766 68 56 0 34 0 0 0

Added Vol: 0 35 0 0 50 86 59 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 34 429 0 0 816 154 115 0 34 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 34 429 0 0 816 154 115 0 34 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 34 429 0 0 816 154 115 0 34 0 0 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Volume: 34 429 0 0 816 154 115 0 34 0 0 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 3.00 0.00 1.00 2.52 0.48 1.00 0.00 1.00 0.00 0.00 0.00

Final Sat.: 1700 5100 0 1700 4292 808 1700 0 1700 0 0 0

Capacity Analysis Module:

Vol/Sat: 0.02 0.08 0.00 0.00 0.19 0.19 0.07 0.00 0.02 0.00 0.00 0.00

Crit Moves: \*\*\*\* \*\*\*\*

Green/Cycle: 0.07 0.76 0.00 0.00 0.68 0.68 0.24 0.00 0.24 0.00 0.00 0.00

Volume/Cap: 0.28 0.11 0.00 0.00 0.28 0.28 0.28 0.00 0.08 0.00 0.00 0.00

Delay/Veh: 54.0 3.9 0.0 0.0 7.4 7.4 37.1 0.0 35.1 0.0 0.0 0.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 54.0 3.9 0.0 0.0 7.4 7.4 37.1 0.0 35.1 0.0 0.0 0.0

LOS by Move: D A A A A A D A D A A A

HCM2kAvgQ: 1 1 0 0 5 5 3 0 1 0 0 0

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*





Cumulative Conditions (2020) Mon Mar 30, 2009 18:37:02

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Scenario Report

Scenario: Cumulative Conditions (2020) without Project PM  
Command: Cumulative Conditions (2020) without Project PM  
Volume: Existing PM  
Geometry: Existing  
Impact Fee: Default Impact Fee  
Trip Generation: Approved Projects PM  
Trip Distribution: Project  
Paths: Default Path  
Routes: Default Route  
Configuration: Cumulative Conditions (2020) without Project

Cumulative Conditions (2020) Mon Mar 30, 2009 18:37:03

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Impact Analysis Report  
Level Of Service

Intersection		Base		Future		Change in
		LOS	Del/ Veh C	LOS	Del/ Veh C	
# 1 Pacific Coast Hwy / Warner Ave	C	25.3	0.703	C	25.3 0.727	-0.005 D/V
# 2 Pacific Coast Hwy / Seapoint A	B	14.9	0.722	B	14.9 0.747	-0.002 D/V
# 3 Pacific Coast Hwy / Goldenwest	C	23.6	0.779	C	24.5 0.803	+ 0.935 D/V
# 4 Pacific Coast Hwy / 17th St	B	10.1	0.626	A	9.9 0.664	-0.183 D/V
# 5 Pacific Coast Hwy / 9th St	A	2.8	0.557	A	2.9 0.599	+ 0.068 D/V
# 6 Pacific Coast Hwy / 6th St	B	12.6	0.451	B	14.1 0.511	+ 1.572 D/V
# 7 Pacific Coast Hwy / Main St	C	20.8	0.548	C	20.4 0.590	-0.442 D/V
# 8 Pacific Coast Hwy / 1st St	B	15.2	0.484	B	19.7 0.582	+ 4.550 D/V
# 9 Pacific Coast Hwy / Huntington	A	8.6	0.593	B	10.0 0.629	+ 1.382 D/V
# 10 Pacific Coast Hwy / Beach Blvd	B	19.9	0.752	C	22.6 0.808	+ 2.753 D/V
# 11 Pacific Coast Hwy / Newland S	B	11.7	0.648	B	11.3 0.684	-0.375 D/V
# 12 Pacific Coast Hwy / Magnolia S	B	10.7	0.680	B	10.5 0.716	-0.253 D/V
# 13 Pacific Coast Hwy / Brookhurst	B	18.8	0.706	B	18.3 0.742	-0.497 D/V
# 14 Main St / Yorktown Ave	C	28.4	0.490	C	28.9 0.526	+ 0.553 D/V
# 15 Main St / 17 th St	B	11.3	0.292	B	10.3 0.320	-1.079 D/V
# 16 Main St / Adams Ave	B	17.3	0.583	B	18.1 0.650	+ 0.761 D/V
# 17 Main St / Walnut Ave	A	9.0	0.314	B	10.2 0.415	+ 0.101 V/C
# 18 Main St / Olive Ave	A	9.0	0.295	A	9.3 0.309	+ 0.013 V/C
# 19 Main St / 6th St	B	13.4	0.186	B	13.4 0.291	-0.062 D/V
# 20 Lake St / 6th St	A	9.5	0.262	A	9.9 0.310	+ 0.048 V/C
# 21 Lake St / Orange Ave	B	11.2	0.516	B	13.4 0.645	+ 0.129 V/C
# 22 1st St / Orange Ave & Atlanta	C	21.2	0.328	C	21.7 0.375	+ 0.503 D/V
# 23 Beach Blvd / Atlanta Ave	C	22.5	0.371	C	24.0 0.410	+ 1.509 D/V
# 24 Beach Blvd / Pacific View Ave	A	8.5	0.265	B	13.3 0.338	+ 4.862 D/V

Cumulative Conditions (2020 Mon Mar 30, 2009 18:37:03

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1 Pacific Coast Hwy / Warner Ave

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.727

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 25.3

Optimal Cycle: 84 Level Of Service: C

\*\*\*\*\*

Street Name:	Pacific Coast Hwy				Warner Ave			
Approach:	North Bound		South Bound		East Bound		West Bound	
Movement:	L	T	R	L	T	R	L	T
	-	-	-	-	-	-	-	-
Control:	Protected		Protected		Protected		Protected	
Rights:	Include		Include		Include		Ovl	
Min. Green:	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	2	0	1

Volume Module:												
Base Vol:	20	1190	320	300	1150	30	30	110	40	330	70	550
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	23	1341	361	338	1296	34	34	124	45	372	79	620
Added Vol:	0	81	3	0	82	0	0	0	0	3	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	1422	364	338	1378	34	34	124	45	375	79	620
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	23	1422	364	338	1378	34	34	124	45	375	79	620
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	23	1422	364	338	1378	34	34	124	45	375	79	620
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	23	1422	364	338	1378	34	34	124	45	375	79	620

Saturation Flow Module:												
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	2.00	1.95	0.05	1.00	0.73	0.27	2.00	1.00	2.00
Final Sat.:	1700	3400	1700	3400	3319	81	1700	1247	453	3400	1700	3400

Capacity Analysis Module:												
Vol/Sat:	0.01	0.42	0.21	0.10	0.42	0.42	0.02	0.10	0.10	0.11	0.05	0.18
Crit Moves:	****		****		****		****		****		****	
Green/Cycle:	0.02	0.58	0.58	0.14	0.69	0.69	0.06	0.14	0.14	0.15	0.23	0.37
Volume/Cap:	0.60	0.73	0.37	0.73	0.60	0.60	0.36	0.73	0.73	0.73	0.20	0.49
Delay/Veh:	82.7	20.0	14.0	55.4	10.3	10.3	56.9	60.6	60.6	53.7	37.3	29.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	82.7	20.0	14.0	55.4	10.3	10.3	56.9	60.6	60.6	53.7	37.3	29.5
LOS by Move:	F	C	B	E	B	B	E	E	E	D	D	C
HCM2kAvgQ:	2	20	7	8	14	14	2	8	8	8	2	9

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

Cumulative Conditions (2020 Mon Mar 30, 2009 18:37:03

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #2 Pacific Coast Hwy / Seapoint Ave

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.747

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 14.9

Optimal Cycle: 90 Level Of Service: B

\*\*\*\*\*

Street Name:	Pacific Coast Hwy				Seapoint Ave			
Approach:	North Bound		South Bound		East Bound		West Bound	
Movement:	L	T - R	L	T - R	L	T - R	L	T - R
Control:	Protected		Protected		Protected		Protected	
Rights:	Include		Include		Include		Include	
Min. Green:	0	0	0	0	0	0	0	0
Lanes:	0	0 1 1 0	1	0 2 0 0	0	0 0 0 0	2	0 0 0 1

Volume Module:

Base Vol:	0	1350	70	210	1370	0	0	0	0	40	0	170
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	0	1521	79	237	1544	0	0	0	0	45	0	192
Added Vol:	0	84	0	0	86	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1605	79	237	1630	0	0	0	0	45	0	192
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1605	79	237	1630	0	0	0	0	45	0	192
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1605	79	237	1630	0	0	0	0	45	0	192
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	1605	79	237	1630	0	0	0	0	45	0	192

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.91	0.09	1.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3241	159	1700	3400	0	0	0	0	3400	0	1700

Capacity Analysis Module:

Vol/Sat:	0.00	0.50	0.50	0.14	0.48	0.00	0.00	0.00	0.00	0.01	0.00	0.11
Crit Moves:	****		****								****	
Green/Cycle:	0.00	0.66	0.66	0.19	0.85	0.00	0.00	0.00	0.00	0.15	0.00	0.15
Volume/Cap:	0.00	0.75	0.75	0.75	0.56	0.00	0.00	0.00	0.00	0.09	0.00	0.75
Delay/Veh:	0.0	14.9	14.9	55.6	2.9	0.0	0.0	0.0	0.0	43.9	0.0	60.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	14.9	14.9	55.6	2.9	0.0	0.0	0.0	0.0	43.9	0.0	60.2
LOS by Move:	A	B	B	E	A	A	A	A	A	D	A	E
HCM2kAvgQ:	0	21	21	10	9	0	0	0	0	1	0	8

Note: Queue reported is the number of cars per lane.

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Cumulative Conditions (2020 Mon Mar 30, 2009 18:37:03

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

```

*****
Intersection #3 Pacific Coast Hwy / Goldenwest St
*****
Cycle (sec):          120          Critical Vol./Cap.(X):          0.803
Loss Time (sec):      0 (Y+R=4.0 sec)  Average Delay (sec/veh):          24.5
Optimal Cycle:        116          Level Of Service:          C
*****
Street Name:          Pacific Coast Hwy          Goldenwest St
Approach:              North Bound          South Bound          East Bound          West Bound
Movement:              L - T - R          L - T - R          L - T - R          L - T - R
-----|-----|-----|-----|
Control:               Protected          Protected          Protected          Protected
Rights:                Include          Include          Include          Include
Min. Green:            0 0 0 0          0 0 0 0          0 0 0 0          0 0 0 0
Lanes:                 1 0 2 0 1          1 0 2 0 0          0 0 0 0 0          1 0 0 0 1
-----|-----|-----|-----|
Volume Module:
Base Vol:              10 1250 220 320 1060 0 0 0 0 190 0 230
Growth Adj:            1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13
Initial Bse:           11 1409 248 361 1194 0 0 0 0 214 0 259
Added Vol:              0 84 45 0 86 0 0 0 0 45 0 0
PasserByVol:           0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut:           11 1493 293 361 1280 0 0 0 0 259 0 259
User Adj:              1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:               1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:            11 1493 293 361 1280 0 0 0 0 259 0 259
Reduct Vol:            0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol:           11 1493 293 361 1280 0 0 0 0 259 0 259
PCE Adj:               1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:               1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:           11 1493 293 361 1280 0 0 0 0 259 0 259
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:              1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment:            1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:                 1.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Final Sat.:            1700 3400 1700 1700 3400 0 0 0 0 1700 0 1700
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:               0.01 0.44 0.17 0.21 0.38 0.00 0.00 0.00 0.00 0.15 0.00 0.15
Crit Moves:            ****          ****          ****
Green/Cycle:           0.01 0.55 0.55 0.26 0.80 0.00 0.00 0.00 0.00 0.19 0.00 0.19
Volume/Cap:            0.47 0.80 0.32 0.80 0.47 0.00 0.00 0.00 0.00 0.80 0.00 0.80
Delay/Veh:             72.8 24.6 15.1 51.3 4.1 0.0 0.0 0.0 0.0 60.0 0.0 60.1
User DelAdj:           1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:            72.8 24.6 15.1 51.3 4.1 0.0 0.0 0.0 0.0 60.0 0.0 60.1
LOS by Move:           E C B D A A A A A E A E
HCM2kAvgQ:             1 24 6 14 8 0 0 0 0 11 0 11
*****

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Note: Queue reported is the number of cars per lane.

Cumulative Conditions (2020 Mon Mar 30, 2009 18:37:03

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

```

*****
Intersection #4 Pacific Coast Hwy / 17th St
*****
Cycle (sec):      120          Critical Vol./Cap.(X):      0.664
Loss Time (sec):    0 (Y+R=4.0 sec)  Average Delay (sec/veh):      9.9
Optimal Cycle:     68          Level Of Service:      A
*****
Street Name:      Pacific Coast Hwy          17th St
Approach:         North Bound      South Bound      East Bound      West Bound
Movement:        L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|-----|
Control:         Protected      Protected      Protected      Protected
Rights:          Include      Include      Include      Include
Min. Green:      0 0 0 0 1      1 0 2 0 0      0 0 0 0 0      0 0 0 0 1
Lanes:           0 0 2 0 1      1 0 2 0 0      0 0 0 0 0      1 0 0 0 1
-----|-----|-----|-----|-----|
Volume Module:
Base Vol:        0 1390      70 160 1110      0 0 0 0      50 0 90
Growth Adj:      1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13
Initial Bse:      0 1566      79 180 1251      0 0 0 0      56 0 101
Added Vol:        0 129      8 0 131      0 0 0 0      6 0 0
PasserByVol:      0 0      0 0 0      0 0 0 0      0 0 0
Initial Fut:      0 1695      87 180 1382      0 0 0 0      62 0 101
User Adj:         1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:          1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:       0 1695      87 180 1382      0 0 0 0      62 0 101
Reduct Vol:       0 0      0 0 0      0 0 0 0      0 0 0
Reduced Vol:      0 1695      87 180 1382      0 0 0 0      62 0 101
PCE Adj:          1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:          1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume:     0 1695      87 180 1382      0 0 0 0      62 0 101
-----|-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:        1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment:      1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:           0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Final Sat.:      0 3400 1700 1700 3400      0 0 0 0 1700 0 1700
-----|-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:         0.00 0.50 0.05 0.11 0.41 0.00 0.00 0.00 0.00 0.04 0.00 0.06
Crit Moves:      ****          ****          ****
Green/Cycle:      0.00 0.75 0.75 0.16 0.91 0.00 0.00 0.00 0.00 0.09 0.00 0.09
Volume/Cap:       0.00 0.66 0.07 0.66 0.45 0.00 0.00 0.00 0.00 0.41 0.00 0.66
Delay/Veh:        0.0 8.1 4.0 53.5 0.9 0.0 0.0 0.0 0.0 53.4 0.0 63.4
User DelAdj:      1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:       0.0 8.1 4.0 53.5 0.9 0.0 0.0 0.0 0.0 53.4 0.0 63.4
LOS by Move:      A A A D A A A A A D A E
HCM2kAvgQ:        0 16 1 7 4 0 0 0 0 3 0 5
*****

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Note: Queue reported is the number of cars per lane.

Cumulative Conditions (2020 Mon Mar 30, 2009 18:37:03

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #5 Pacific Coast Hwy / 9th St

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.599

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 2.9

Optimal Cycle: 57 Level Of Service: A

\*\*\*\*\*

Street Name:	Pacific Coast Hwy						9th St						
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0	0	2	0	1	1	0	2	0	0	1	0	0

Volume Module:

Base Vol:	0	1540	30	20	1150	0	0	0	0	50	0	20
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	0	1735	34	23	1296	0	0	0	0	56	0	23
Added Vol:	0	138	4	0	137	0	0	0	0	3	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1873	38	23	1433	0	0	0	0	59	0	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1873	38	23	1433	0	0	0	0	59	0	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1873	38	23	1433	0	0	0	0	59	0	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	1873	38	23	1433	0	0	0	0	59	0	23

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3400	1700	1700	3400	0	0	0	0	1700	0	1700

Capacity Analysis Module:

Vol/Sat:	0.00	0.55	0.02	0.01	0.42	0.00	0.00	0.00	0.00	0.03	0.00	0.01
Crit Moves:	****			****						****		
Green/Cycle:	0.00	0.92	0.92	0.02	0.94	0.00	0.00	0.00	0.00	0.06	0.00	0.06
Volume/Cap:	0.00	0.60	0.02	0.60	0.45	0.00	0.00	0.00	0.00	0.60	0.00	0.23
Delay/Veh:	0.0	1.2	0.4	82.1	0.5	0.0	0.0	0.0	0.0	64.9	0.0	55.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	1.2	0.4	82.1	0.5	0.0	0.0	0.0	0.0	64.9	0.0	55.1
LOS by Move:	A	A	A	F	A	A	A	A	A	E	A	E
HCM2kAvgQ:	0	7	0	2	3	0	0	0	0	3	0	1

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

```

*****
Intersection #6 Pacific Coast Hwy / 6th St
*****
Cycle (sec):          120          Critical Vol./Cap. (X):          0.511
Loss Time (sec):       0 (Y+R=4.0 sec)  Average Delay (sec/veh):          14.1
Optimal Cycle:         38          Level Of Service:          B
*****
Street Name:          Pacific Coast Hwy          6th St
Approach:             North Bound          South Bound          East Bound          West Bound
Movement:             L - T - R          L - T - R          L - T - R          L - T - R
-----|-----|-----|-----|
Control:              Protected          Protected          Permitted          Permitted
Rights:               Include          Include          Include          Include
Min. Green:           0 0 0 0          0 0 0 0          0 0 0 0          0 0 0 0
Lanes:                1 0 2 1 0          1 0 2 1 0          0 0 1! 0 0          1 0 0 1 0
-----|-----|-----|-----|
Volume Module:
Base Vol:             40 1360          50 80 1030          30 40 20 70          40 30 70
Growth Adj:           1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13
Initial Bse:          45 1532          56 90 1161          34 45 23 79          45 34 79
Added Vol:             0 103          58 43 97          0 0 0 0          53 0 39
PasserByVol:          0 0 0          0 0 0          0 0 0          0 0 0
Initial Fut:          45 1635          114 133 1258          34 45 23 79          98 34 118
User Adj:             1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:              1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:           45 1635          114 133 1258          34 45 23 79          98 34 118
Reduct Vol:           0 0 0          0 0 0          0 0 0          0 0 0
Reduced Vol:          45 1635          114 133 1258          34 45 23 79          98 34 118
PCE Adj:              1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:              1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:          45 1635          114 133 1258          34 45 23 79          98 34 118
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:             1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment:           1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:                1.00 2.80 0.20 1.00 2.92 0.08 0.31 0.15 0.54 1.00 0.22 0.78
Final Sat.:           1700 4767          333 1700 4967          133 523 262 915          1700 379 1321
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:              0.03 0.34 0.34 0.08 0.25 0.25 0.09 0.09 0.09 0.06 0.09 0.09
Crit Moves:           ****          ****          ****          ****
Green/Cycle:          0.08 0.67 0.67 0.15 0.75 0.75 0.17 0.17 0.17 0.17 0.17 0.17
Volume/Cap:           0.34 0.51 0.51 0.51 0.34 0.34 0.49 0.49 0.49 0.33 0.51 0.51
Delay/Veh:            53.9 10.0 10.0 48.4 5.2 5.2 46.0 46.0 46.0 44.0 46.4 46.4
User DelAdj:          1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:           53.9 10.0 10.0 48.4 5.2 5.2 46.0 46.0 46.0 44.0 46.4 46.4
LOS by Move:          D A A          D A A          D D D          D D D
HCM2kAvgQ:            2 11 11          5 5 5          5 5 5          3 6 6
*****

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Note: Queue reported is the number of cars per lane.



Cumulative Conditions (2020 Mon Mar 30, 2009 18:37:03

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #7 Pacific Coast Hwy / Main St

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.590

Loss Time (sec): 30 (Y+R=4.0 sec) Average Delay (sec/veh): 20.4

Optimal Cycle: 86 Level Of Service: C

\*\*\*\*\*

Street Name:	Pacific Coast Hwy				Main St				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Protected		Protected		
Rights:	Include		Include		Include		Include		
Min. Green:	0	0	0	0	0	0	0	0	0
Lanes:	1	0	3	0	1	0	3	0	1

Volume Module:

Base Vol:	40	1320	130	90	1040	0	0	0	0	90	0	90
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	45	1487	146	101	1172	0	0	0	0	101	0	101
Added Vol:	0	161	0	0	149	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	45	1648	146	101	1321	0	0	0	0	101	0	101
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	45	1648	146	101	1321	0	0	0	0	101	0	101
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	45	1648	146	101	1321	0	0	0	0	101	0	101
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	45	1648	146	101	1321	0	0	0	0	101	0	101

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	1700	5100	1700	1700	5100	0	0	0	0	1700	0	1700

Capacity Analysis Module:

Vol/Sat:	0.03	0.32	0.09	0.06	0.26	0.00	0.00	0.00	0.00	0.06	0.00	0.06
Crit Moves:	****			****			****			****		
Green/Cycle:	0.06	0.55	0.55	0.10	0.59	0.00	0.00	0.00	0.00	0.10	0.00	0.10
Volume/Cap:	0.44	0.59	0.16	0.59	0.44	0.00	0.00	0.00	0.00	0.59	0.00	0.59
Delay/Veh:	57.4	18.5	13.5	56.9	13.8	0.0	0.0	0.0	0.0	56.9	0.0	56.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.4	18.5	13.5	56.9	13.8	0.0	0.0	0.0	0.0	56.9	0.0	56.9
LOS by Move:	E	B	B	E	B	A	A	A	A	E	A	E
HCM2kAvgQ:	2	14	3	4	9	0	0	0	0	4	0	4

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #8 Pacific Coast Hwy / 1st St

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.582

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 19.7

Optimal Cycle: 55 Level Of Service: B

\*\*\*\*\*

Street Name: Pacific Coast Hwy 1st St

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 1 0 0 1 1 1 0 0 2

-----|-----|-----|-----|

Volume Module:

Base Vol: 50 1430 70 100 1000 20 60 40 60 110 30 50

Growth Adj: 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13

Initial Bse: 56 1611 79 113 1127 23 68 45 68 124 34 56

Added Vol: 0 58 64 97 53 0 0 0 0 58 0 103

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 56 1669 143 210 1180 23 68 45 68 182 34 159

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 56 1669 143 210 1180 23 68 45 68 182 34 159

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 56 1669 143 210 1180 23 68 45 68 182 34 159

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Volume: 56 1669 143 210 1180 23 68 45 68 182 34 159

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.76 0.24 1.00 2.94 0.06 1.20 0.80 1.00 1.69 0.31 2.00

Final Sat.: 1700 4698 402 1700 5004 96 2040 1360 1700 2867 533 3400

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.03 0.36 0.36 0.12 0.24 0.24 0.03 0.03 0.04 0.06 0.06 0.05

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.10 0.61 0.61 0.21 0.72 0.72 0.07 0.07 0.07 0.11 0.11 0.11

Volume/Cap: 0.33 0.58 0.58 0.58 0.33 0.33 0.48 0.48 0.58 0.58 0.58 0.43

Delay/Veh: 51.2 14.4 14.4 44.9 6.2 6.2 55.5 55.5 61.5 53.2 53.2 50.8

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 51.2 14.4 14.4 44.9 6.2 6.2 55.5 55.5 61.5 53.2 53.2 50.8

LOS by Move: D B B D A A E E E D D D

HCM2kAvgQ: 2 14 14 8 5 5 3 3 3 5 5 3

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #9 Pacific Coast Hwy / Huntington St

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.629

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 10.0

Optimal Cycle: 50 Level Of Service: B

\*\*\*\*\*

Street Name: Pacific Coast Hwy Huntington St

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 2 0 1 1 0 2 0 1 0 1 0 1 0 1 1 0 0 1

-----|-----|-----|-----|

Volume Module:

Base Vol: 40 1520 70 50 1060 10 40 50 80 10 30 30

Growth Adj: 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13

Initial Bse: 45 1713 79 56 1194 11 45 56 90 11 34 34

Added Vol: 0 123 134 0 111 0 0 0 0 145 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 45 1836 213 56 1305 11 45 56 90 156 34 34

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 45 1836 213 56 1305 11 45 56 90 156 34 34

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 45 1836 213 56 1305 11 45 56 90 156 34 34

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Volume: 45 1836 213 56 1305 11 45 56 90 156 34 34

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 0.47 0.59 0.94 1.64 0.36 1.00

Final Sat.: 1700 3400 1700 1700 3400 1700 800 1000 1600 2795 605 1700

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.03 0.54 0.13 0.03 0.38 0.01 0.06 0.06 0.06 0.06 0.06 0.02

Crit Moves: \*\*\*\* \*\*\*\*

Green/Cycle: 0.06 0.86 0.86 0.05 0.85 0.85 0.09 0.09 0.09 0.09 0.09 0.09

Volume/Cap: 0.45 0.63 0.15 0.63 0.45 0.01 0.63 0.63 0.63 0.62 0.62 0.22

Delay/Veh: 57.8 3.1 1.4 69.2 2.3 1.3 56.9 56.9 56.9 56.7 56.7 51.5

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 57.8 3.1 1.4 69.2 2.3 1.3 56.9 56.9 56.9 56.7 56.7 51.5

LOS by Move: E A A E A A E E E E E D

HCM2kAvgQ: 2 11 1 3 6 0 4 4 4 4 4 1

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #10 Pacific Coast Hwy / Beach Blvd

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.808  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 22.6  
Optimal Cycle: 119 Level Of Service: C

\*\*\*\*\*

Street Name:	Pacific Coast Hwy				Beach Blvd				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Protected		Protected		
Rights:	Include		Include		Ignore		Ignore		
Min. Green:	0	0	0	0	0	0	0	0	
Lanes:	1	0	2	0	1	1	0	2	0

Volume Module:

Base Vol:	40	1380	750	190	1010	30	20	50	30	340	50	110
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	45	1555	845	214	1138	34	23	56	34	383	56	124
Added Vol:	0	182	0	71	184	0	0	0	0	0	0	74
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	45	1737	845	285	1322	34	23	56	34	383	56	198
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	45	1737	845	285	1322	34	23	56	0	383	56	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	45	1737	845	285	1322	34	23	56	0	383	56	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	45	1737	845	285	1322	34	23	56	0	383	56	0

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	2.00	1.00	1.00
Final Sat.:	1700	3400	1700	1700	3400	1700	1700	3400	1700	3400	1700	1700

Capacity Analysis Module:

Vol/Sat:	0.03	0.51	0.50	0.17	0.39	0.02	0.01	0.02	0.00	0.11	0.03	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.05	0.63	0.63	0.21	0.79	0.79	0.05	0.02	0.00	0.14	0.11	0.00
Volume/Cap:	0.49	0.81	0.79	0.81	0.49	0.03	0.29	0.81	0.00	0.81	0.29	0.00
Delay/Veh:	59.4	18.9	20.0	58.2	4.6	2.8	57.4	107	0.0	60.0	49.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	59.4	18.9	20.0	58.2	4.6	2.8	57.4	107	0.0	60.0	49.5	0.0
LOS by Move:	E	B	C	E	A	A	E	F	A	E	D	A
HCM2kAvgQ:	2	25	24	12	9	0	1	2	0	9	2	0

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

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*****
Intersection #11 Pacific Coast Hwy / Newland St
*****
Cycle (sec):      120          Critical Vol./Cap.(X):      0.684
Loss Time (sec):   0 (Y+R=4.0 sec)  Average Delay (sec/veh):      11.3
Optimal Cycle:     72          Level Of Service:      B
*****
Street Name:      Pacific Coast Hwy          Newland St
Approach:          North Bound          South Bound          East Bound          West Bound
Movement:         L - T - R          L - T - R          L - T - R          L - T - R
-----|-----|-----|-----|
Control:          Protected          Protected          Split Phase          Split Phase
Rights:           Include          Include          Include          Include
Min. Green:       0 0 0 0          0 0 0 0          0 0 0 0          0 0 0 0
Lanes:            1 0 3 0 1          1 0 3 0 1          0 1 0 1 0          0 1 0 0 1
-----|-----|-----|-----|
Volume Module:
Base Vol:         0 2080 270 150 1150 10 0 10 0 100 0 130
Growth Adj:       1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13
Initial Bse:      0 2344 304 169 1296 11 0 11 0 113 0 146
Added Vol:        0 182 0 0 184 0 0 0 0 0 0 0
PasserByVol:      0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut:      0 2526 304 169 1480 11 0 11 0 113 0 146
User Adj:         1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:          1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:       0 2526 304 169 1480 11 0 11 0 113 0 146
Reduct Vol:       0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol:      0 2526 304 169 1480 11 0 11 0 113 0 146
PCE Adj:          1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:          1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:      0 2526 304 169 1480 11 0 11 0 113 0 146
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:         1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment:       1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:            1.00 3.00 1.00 1.00 3.00 1.00 0.00 2.00 0.00 1.00 0.00 1.00
Final Sat.:       1700 5100 1700 1700 5100 1700 0 3400 0 1700 0 1700
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:          0.00 0.50 0.18 0.10 0.29 0.01 0.00 0.00 0.00 0.07 0.00 0.09
Crit Moves:       ****          ****          ****          ****
Green/Cycle:      0.00 0.72 0.72 0.15 0.87 0.87 0.00 0.00 0.00 0.13 0.00 0.13
Volume/Cap:       0.00 0.68 0.25 0.68 0.33 0.01 0.00 0.68 0.00 0.53 0.00 0.68
Delay/Veh:        0.0 9.6 5.7 56.4 1.5 1.0 0.0 138 0.0 51.5 0.0 59.0
User DelAdj:      1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:       0.0 9.6 5.7 56.4 1.5 1.0 0.0 138 0.0 51.5 0.0 59.0
LOS by Move:      A A A E A A A F A D A E
HCM2kAvgQ:        0 17 4 7 4 0 0 1 0 5 0 6
*****

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Note: Queue reported is the number of cars per lane.



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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #12 Pacific Coast Hwy / Magnolia St

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.716

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 10.5

Optimal Cycle: 80 Level Of Service: B

\*\*\*\*\*

Street Name:	Pacific Coast Hwy										Magnolia St									
Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
-----	-----					-----					-----					-----				
Control:	Protected					Protected					Split Phase					Split Phase				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	3	0	1	1	0	3	0	1	1	0	0	1	0	1	1	0	0	1

Volume Module:

Base Vol:	30	2390	180	120	1070	30	20	30	10	70	30	70
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	34	2693	203	135	1206	34	23	34	11	79	34	79
Added Vol:	0	182	0	0	184	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	34	2875	203	135	1390	34	23	34	11	79	34	79
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	34	2875	203	135	1390	34	23	34	11	79	34	79
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	34	2875	203	135	1390	34	23	34	11	79	34	79
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	34	2875	203	135	1390	34	23	34	11	79	34	79

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	0.75	0.25	1.40	0.60	1.00
Final Sat.:	1700	5100	1700	1700	5100	1700	1700	1275	425	2380	1020	1700

Capacity Analysis Module:

Vol/Sat:	0.02	0.56	0.12	0.08	0.27	0.02	0.01	0.03	0.03	0.03	0.03	0.05
Crit Moves:	****			****			****			****		
Green/Cycle:	0.06	0.79	0.79	0.11	0.84	0.84	0.04	0.04	0.04	0.06	0.06	0.06
Volume/Cap:	0.33	0.72	0.15	0.72	0.33	0.02	0.36	0.72	0.72	0.51	0.51	0.72
Delay/Veh:	55.8	6.9	3.1	63.9	2.2	1.6	59.9	89.5	89.5	56.3	56.3	75.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.8	6.9	3.1	63.9	2.2	1.6	59.9	89.5	89.5	56.3	56.3	75.1
LOS by Move:	E	A	A	E	A	A	E	F	F	E	E	E
HCM2kAvgQ:	2	18	2	6	4	0	1	3	3	3	3	4

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*



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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #13 Pacific Coast Hwy / Brookhurst St

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.742  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 18.3  
Optimal Cycle: 88 Level Of Service: B

\*\*\*\*\*

Street Name:	Pacific Coast Hwy						Brookhurst St						
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1	0	3	0	1	1	0	3	0	1	2	0	1

Volume Module:

Base Vol:	20	2010	540	190	1240	10	20	40	30	270	30	140
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	23	2265	608	214	1397	11	23	45	34	304	34	158
Added Vol:	0	182	0	0	184	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	2447	608	214	1581	11	23	45	34	304	34	158
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	23	2447	608	214	1581	11	23	45	34	304	34	158
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	23	2447	608	214	1581	11	23	45	34	304	34	158
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	23	2447	608	214	1581	11	23	45	34	304	34	158

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	0.57	0.43	2.00	1.00	1.00
Final Sat.:	1700	5100	1700	1700	5100	1700	1700	971	729	3400	1700	1700

Capacity Analysis Module:

Vol/Sat:	0.01	0.48	0.36	0.13	0.31	0.01	0.01	0.05	0.05	0.09	0.02	0.09
Crit Moves:	****			****			****			****		
Green/Cycle:	0.03	0.65	0.65	0.17	0.78	0.78	0.02	0.06	0.06	0.12	0.16	0.16
Volume/Cap:	0.40	0.74	0.55	0.74	0.40	0.01	0.58	0.74	0.74	0.74	0.12	0.58
Delay/Veh:	61.3	15.3	12.3	57.2	4.1	2.8	78.0	79.4	79.4	58.1	43.4	49.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	61.3	15.3	12.3	57.2	4.1	2.8	78.0	79.4	79.4	58.1	43.4	49.7
LOS by Move:	E	B	B	E	A	A	E	E	E	E	D	D
HCM2kAvgQ:	1	21	12	9	6	0	2	4	4	7	1	6

Note: Queue reported is the number of cars per lane.

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #14 Main St / Yorktown Ave

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.526

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 28.9

Optimal Cycle: 48 Level Of Service: C

\*\*\*\*\*

Street Name: Main St Yorktown Ave

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 2 0 1 2 0 2 0 1 1 0 2 0 1

-----|-----|-----|-----|

Volume Module:

Base Vol: 190 390 50 230 460 90 70 460 150 80 500 160

Growth Adj: 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13

Initial Bse: 214 439 56 259 518 101 79 518 169 90 563 180

Added Vol: 0 49 41 0 52 0 0 2 0 45 1 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 214 488 97 259 570 101 79 520 169 135 564 180

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 214 488 97 259 570 101 79 520 169 135 564 180

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 214 488 97 259 570 101 79 520 169 135 564 180

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Volume: 214 488 97 259 570 101 79 520 169 135 564 180

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 2.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 3400 1700 3400 3400 1700 1700 3400 1700 1700 3400 1700

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.13 0.14 0.06 0.08 0.17 0.06 0.05 0.15 0.10 0.08 0.17 0.11

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.24 0.36 0.36 0.19 0.32 0.32 0.10 0.29 0.29 0.15 0.35 0.35

Volume/Cap: 0.53 0.39 0.16 0.39 0.53 0.19 0.48 0.53 0.34 0.53 0.48 0.31

Delay/Veh: 34.4 23.8 21.5 35.6 28.4 24.8 45.0 30.2 28.3 41.2 26.0 24.3

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 34.4 23.8 21.5 35.6 28.4 24.8 45.0 30.2 28.3 41.2 26.0 24.3

LOS by Move: C C C D C C D C C D C C

HCM2kAvgQ: 6 6 2 4 8 2 3 7 4 5 7 4

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

Cumulative Conditions (2020 Mon Mar 30, 2009 18:37:03

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #15 Main St / 17 th St

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.320

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 10.3

Optimal Cycle: 21 Level Of Service: B

\*\*\*\*\*

Street Name: Main St 17th St

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Permitted Permitted Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 2 0 1 0 0 1 1 1 1 0 0 0 0 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 10 430 10 0 520 180 180 10 0 0 0 0

Growth Adj: 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13

Initial Bse: 11 485 11 0 586 203 203 11 0 0 0 0

Added Vol: 0 90 0 0 97 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 11 575 11 0 683 203 203 11 0 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 11 575 11 0 683 203 203 11 0 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 11 575 11 0 683 203 203 11 0 0 0 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 11 575 11 0 683 203 203 11 0 0 0 0

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 0.00 2.00 1.00 1.00 1.00 0.00 1.00 0.00 0.00

Final Sat.: 1700 3400 1700 0 3400 1700 1700 1700 0 1700 0 0

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.01 0.17 0.01 0.00 0.20 0.12 0.12 0.01 0.00 0.00 0.00 0.00

Crit Moves: \*\*\*\*

Green/Cycle: 0.63 0.63 0.63 0.00 0.63 0.63 0.37 0.37 0.00 0.00 0.00 0.00

Volume/Cap: 0.01 0.27 0.01 0.00 0.32 0.19 0.32 0.02 0.00 0.00 0.00 0.00

Delay/Veh: 7.0 8.4 7.0 0.0 8.8 7.9 22.6 19.8 0.0 0.0 0.0 0.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 7.0 8.4 7.0 0.0 8.8 7.9 22.6 19.8 0.0 0.0 0.0 0.0

LOS by Move: A A A A A A C B A A A A

HCM2kAvgQ: 0 4 0 0 5 3 4 0 0 0 0 0

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

Cumulative Conditions (2020 Mon Mar 30, 2009 18:37:04

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #16 Main St / Adams Ave

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.650

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 18.1

Optimal Cycle: 41 Level Of Service: B

\*\*\*\*\*

Street Name: Main St Adams Ave

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Permitted Permitted Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 1 0 1 1 0 1 0 0 1 0 1 0 0 1

-----|-----|-----|-----|

Volume Module:

Base Vol: 10 370 90 80 420 10 0 160 10 180 280 60

Growth Adj: 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13

Initial Bse: 11 417 101 90 473 11 0 180 11 203 316 68

Added Vol: 0 90 15 0 97 0 0 0 0 16 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 11 507 116 90 570 11 0 180 11 219 316 68

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 11 507 116 90 570 11 0 180 11 219 316 68

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 11 507 116 90 570 11 0 180 11 219 316 68

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Volume: 11 507 116 90 570 11 0 180 11 219 316 68

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.41 0.59 1.00

Final Sat.: 1700 1700 1700 1700 1700 1700 0 1700 1700 696 1004 1700

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.01 0.30 0.07 0.05 0.34 0.01 0.00 0.11 0.01 0.31 0.31 0.04

Crit Moves: \*\*\*\*\*

Green/Cycle: 0.52 0.52 0.52 0.52 0.52 0.52 0.00 0.48 0.48 0.48 0.48 0.48

Volume/Cap: 0.01 0.58 0.13 0.10 0.65 0.01 0.00 0.22 0.01 0.65 0.65 0.08

Delay/Veh: 11.8 17.6 12.6 12.4 19.3 11.8 0.0 15.0 13.4 21.3 21.3 13.9

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 11.8 17.6 12.6 12.4 19.3 11.8 0.0 15.0 13.4 21.3 21.3 13.9

LOS by Move: B B B B B B A B B C C B

HCM2kAvgQ: 0 11 2 1 13 0 0 3 0 13 13 1

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*



Cumulative Conditions (2020 Mon Mar 30, 2009 18:37:04

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #17 Main St / Walnut Ave  
\*\*\*\*\*

Cycle (sec): 0 Critical Vol./Cap.(X): 0.415  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 10.2  
Optimal Cycle: 0 Level Of Service: B  
\*\*\*\*\*

Street Name:	Main St						Walnut Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0

Volume Module:	Main St NB			Main St SB			Walnut Ave EB			Walnut Ave WB		
Base Vol:	10	150	60	30	120	20	10	30	20	30	40	30
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	11	169	68	34	135	23	11	34	23	34	45	34
Added Vol:	0	66	0	16	60	0	0	0	0	0	0	17
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	235	68	50	195	23	11	34	23	34	45	51
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	235	68	50	195	23	11	34	23	34	45	51
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	235	68	50	195	23	11	34	23	34	45	51
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	11	235	68	50	195	23	11	34	23	34	45	51

Saturation Flow Module:	Main St NB			Main St SB			Walnut Ave EB			Walnut Ave WB		
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.04	0.75	0.21	0.19	0.73	0.08	0.17	0.50	0.33	0.26	0.35	0.39
Final Sat.:	27	566	163	136	532	61	103	308	205	167	223	251

Capacity Analysis Module:	Main St NB			Main St SB			Walnut Ave EB			Walnut Ave WB		
Vol/Sat:	0.41	0.41	0.41	0.37	0.37	0.37	0.11	0.11	0.11	0.20	0.20	0.20
Crit Moves:	****			****			****			****		
Delay/Veh:	10.7	10.7	10.7	10.3	10.3	10.3	8.8	8.8	8.8	9.3	9.3	9.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.7	10.7	10.7	10.3	10.3	10.3	8.8	8.8	8.8	9.3	9.3	9.3
LOS by Move:	B	B	B	B	B	B	A	A	A	A	A	A
ApproachDel:	10.7			10.3			8.8			9.3		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	10.7			10.3			8.8			9.3		
LOS by Appr:	B			B			A			A		
AllWayAvgQ:	0.6	0.6	0.6	0.5	0.5	0.5	0.1	0.1	0.1	0.2	0.2	0.2

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.



Cumulative Conditions (2020Mon Mar 30, 2009 18:37:04

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Detailed Computation Report  
2000 HCM 4-Way Stop Method  
Future Volume Alternative

\*\*\*\*\*  
Intersection #17 Main St / Walnut Ave  
\*\*\*\*\*

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R

Time Period: 0.25 hour

HevVeh:	0%	0%	0%	0%
---------	----	----	----	----

Alpha Value: 0.01

GroupType:	1	1	1	1
P[C1]:	0.48	0.44	0.32	0.35
P[C2]:	0.26	0.30	0.07	0.04
P[C3]:	0.16	0.15	0.38	0.42
P[C4]:	0.10	0.11	0.20	0.17
P[C5]:	0.01	0.01	0.03	0.01
Padj[C1]:	0.009	0.009	0.016	0.015
Padj[C2]:	0.001	0.001	0.008	0.008
Padj[C3]:	-0.004	-0.003	-0.009	-0.011
Padj[C4]:	-0.006	-0.007	-0.012	-0.010
Padj[C5]:	-0.001	-0.001	-0.003	-0.001

Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.122	-0.013	-0.167	-0.183
Volume:	314	268	68	130
Capacity:	756	729	615	641
DegOfUtil:	0.40	0.35	0.10	0.18
DepHeadway:	4.60	4.75	5.23	5.12
ServiceTime:	2.6	2.8	3.2	3.1
Delay:	10.7	10.3	8.8	9.3
Queue:	0.6	0.5	0.1	0.2

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	10.7	10.3	8.8	9.3
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	10.7	10.3	8.8	9.3
LOS by Appr:	B	B	A	A
OverallDel:			10.2	
OverallLOS:			B	

Cumulative Conditions (2020 Mon Mar 30, 2009 18:37:04

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report  
2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #18 Main St / Olive Ave

\*\*\*\*\*

Cycle (sec): 0 Critical Vol./Cap.(X): 0.309  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 9.3  
Optimal Cycle: 0 Level Of Service: A

\*\*\*\*\*

Street Name:	Main St						Olive Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	0	0	0	1	0	0	0

Volume Module:	Main St			Main St			Olive Ave			Olive Ave		
Base Vol:	30	140	30	40	120	30	20	30	30	20	30	40
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	34	158	34	45	135	34	23	34	34	23	34	45
Added Vol:	0	4	0	0	3	0	0	16	0	0	17	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	34	162	34	45	138	34	23	50	34	23	51	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	34	162	34	45	138	34	23	50	34	23	51	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	34	162	34	45	138	34	23	50	34	23	51	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	34	162	34	45	138	34	23	50	34	23	51	45

Saturation Flow Module:	Main St			Main St			Olive Ave			Olive Ave		
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.15	0.70	0.15	0.21	0.64	0.15	0.21	0.47	0.32	0.19	0.43	0.38
Final Sat.:	110	524	110	154	471	115	143	316	214	130	292	259

Capacity Analysis Module:	Main St			Main St			Olive Ave			Olive Ave		
Vol/Sat:	0.31	0.31	0.31	0.29	0.29	0.29	0.16	0.16	0.16	0.17	0.17	0.17
Crit Moves:	****			****			****			****		
Delay/Veh:	9.6	9.6	9.6	9.5	9.5	9.5	8.8	8.8	8.8	8.8	8.8	8.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.6	9.6	9.6	9.5	9.5	9.5	8.8	8.8	8.8	8.8	8.8	8.8
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	9.6			9.5			8.8			8.8		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	9.6			9.5			8.8			8.8		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

Cumulative Conditions (2020) Mon Mar 30, 2009 18:37:04

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Detailed Computation Report  
2000 HCM 4-Way Stop Method  
Future Volume Alternative

\*\*\*\*\*  
Intersection #18 Main St / Olive Ave  
\*\*\*\*\*

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period:	0.25 hour			
HevVeh:	0%	0%	0%	0%
Alpha Value:	0.01			

GroupType:	1	1	1	1
P[C1]:	0.52	0.51	0.43	0.43
P[C2]:	0.20	0.21	0.08	0.07
P[C3]:	0.19	0.18	0.34	0.35
P[C4]:	0.09	0.09	0.14	0.13
P[C5]:	0.01	0.01	0.01	0.01
Padj[C1]:	0.009	0.009	0.012	0.012
Padj[C2]:	0.002	0.002	0.006	0.006
Padj[C3]:	-0.005	-0.004	-0.009	-0.009
Padj[C4]:	-0.005	-0.006	-0.008	-0.008
Padj[C5]:	-0.001	-0.001	-0.001	-0.001

Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.059	-0.052	-0.149	-0.190
Volume:	229	217	106	118
Capacity:	743	740	673	682
DegOfUtil:	0.30	0.28	0.15	0.16
DepHeadway:	4.64	4.66	4.92	4.87
ServiceTime:	2.6	2.7	2.9	2.9
Delay:	9.6	9.5	8.8	8.8
Queue:	0.4	0.4	0.2	0.2

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	9.6	9.5	8.8	8.8
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	9.6	9.5	8.8	8.8
LOS by Appr:	A	A	A	A
OverallDel:			9.3	
OverallLOS:			A	

Cumulative Conditions (2020 Mon Mar 30, 2009 18:37:04

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #19 Main St / 6th St  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.291  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 13.4  
Optimal Cycle: 20 Level Of Service: B  
\*\*\*\*\*

Street Name:	Main St						6th St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	1	1	0	1

Volume Module:	Main St NB			Main St SB			6th St EB			6th St WB		
Base Vol:	10	150	20	30	160	50	50	70	10	30	70	30
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	11	169	23	34	180	56	56	79	11	34	79	34
Added Vol:	0	30	0	0	30	90	81	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	199	23	34	210	146	137	79	11	34	79	34
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	199	23	34	210	146	137	79	11	34	79	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	199	23	34	210	146	137	79	11	34	79	34
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	11	199	23	34	210	146	137	79	11	34	79	34

Saturation Flow Module:	Main St NB			Main St SB			6th St EB			6th St WB		
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.90	0.10	1.00	0.59	0.41	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1700	1527	173	1700	1002	698	1700	1700	1700	1700	1700	1700

Capacity Analysis Module:	Main St NB			Main St SB			6th St EB			6th St WB		
Vol/Sat:	0.01	0.13	0.13	0.02	0.21	0.21	0.08	0.05	0.01	0.02	0.05	0.02
Crit Moves:				****			****					
Green/Cycle:	0.72	0.72	0.72	0.72	0.72	0.72	0.28	0.28	0.28	0.28	0.28	0.28
Volume/Cap:	0.01	0.18	0.18	0.03	0.29	0.29	0.29	0.17	0.02	0.07	0.17	0.07
Delay/Veh:	3.9	4.5	4.5	4.0	5.0	5.0	28.7	27.5	26.3	26.7	27.5	26.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	3.9	4.5	4.5	4.0	5.0	5.0	28.7	27.5	26.3	26.7	27.5	26.7
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	0	2	2	0	4	4	3	2	0	1	2	1

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #20 Lake St / 6th St

\*\*\*\*\*

Cycle (sec): 0 Critical Vol./Cap.(X): 0.310

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 9.9

Optimal Cycle: 0 Level Of Service: A

\*\*\*\*\*

Street Name: Lake St 6th St

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Stop Sign Stop Sign Stop Sign Stop Sign

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 0 1 0 1 0 1 0 0 1 0 1 0 0 0 1

-----|-----|-----|-----|

Volume Module:

Base Vol: 10 130 20 30 120 50 50 60 10 10 70 20

Growth Adj: 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13

Initial Bse: 11 146 23 34 135 56 56 68 11 11 79 23

Added Vol: 0 29 0 0 22 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 11 175 23 34 157 56 56 68 11 11 79 23

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 11 175 23 34 157 56 56 68 11 11 79 23

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 11 175 23 34 157 56 56 68 11 11 79 23

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Volume: 11 175 23 34 157 56 56 68 11 11 79 23

-----|-----|-----|-----|

Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 0.89 0.11 1.00 1.00 1.00 0.45 0.55 1.00 0.12 0.88 1.00

Final Sat.: 575 566 73 554 603 680 256 307 655 71 500 648

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Capacity Analysis Module:

Vol/Sat: 0.02 0.31 0.31 0.06 0.26 0.08 0.22 0.22 0.02 0.16 0.16 0.03

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

Delay/Veh: 8.8 10.4 10.4 9.3 10.4 8.2 10.3 10.3 7.9 9.6 9.6 8.0

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 8.8 10.4 10.4 9.3 10.4 8.2 10.3 10.3 7.9 9.6 9.6 8.0

LOS by Move: A B B A B A B B A A A A

ApproachDel: 10.3 9.7 10.1 9.3

Delay Adj: 1.00 1.00 1.00 1.00

ApprAdjDel: 10.3 9.7 10.1 9.3

LOS by Appr: B A B A

AllWayAvgQ: 0.0 0.4 0.4 0.1 0.3 0.1 0.2 0.2 0.0 0.2 0.2 0.0

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.



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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Detailed Computation Report  
2000 HCM 4-Way Stop Method  
Future Volume Alternative

\*\*\*\*\*  
Intersection #20 Lake St / 6th St  
\*\*\*\*\*

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R

Time Period: 0.25 hour

HevVeh:	0%	0%	0%	0%
---------	----	----	----	----

Alpha Value: 0.01

GroupType:	5	6	5	5
P[C1]:	0.42	0.44	0.37	0.35
P[C2]:	0.23	0.20	0.08	0.10
P[C3]:	0.21	0.22	0.37	0.35
P[C4]:	0.14	0.13	0.17	0.18
P[C5]:	0.01	0.01	0.02	0.02
Padj[C1]:	0.011	0.011	0.014	0.014
Padj[C2]:	0.003	0.003	0.007	0.007
Padj[C3]:	-0.005	-0.005	-0.009	-0.008
Padj[C4]:	-0.008	-0.007	-0.010	-0.011
Padj[C5]:	-0.001	-0.001	-0.002	-0.002

Lanes:	L1	L2	L1	L2	L1	L2	L1	L2
LaneType:	LEFT	RTTHRU	LEFT	RITE	RITE	LTTHRU	RITE	LTTHRU
HeadwayAdj:	0.500	-0.080	0.500	-0.700	-0.700	0.227	-0.700	0.063
Volume:	11	198	34	56	11	124	23	90
Capacity:	575	638	554	680	655	563	648	572
DegOfUtil:	0.02	0.30	0.06	0.08	0.02	0.21	0.03	0.15
DepHeadway:	5.99	5.41	6.25	5.05	5.12	6.05	5.16	5.92
ServiceTime:	3.7	3.1	3.9	2.7	2.8	3.7	2.9	3.6
Delay:	8.8	10.4	9.3	8.2	7.9	10.3	8.0	9.6
Queue:	0.0	0.4	0.1	0.1	0.0	0.2	0.0	0.2

Lane:	L3	L3	L3	L3
LaneType:	NOLANE	THRU	NOLANE	NOLANE
HeadwayAdj:	xx.xxx	0.000	xx.xxx	xx.xxx
Volume:	xxxxxx	157	xxxxxx	xxxxxx
Capacity:	xxxxxx	603	xxxxxx	xxxxxx
DegOfUtil:	x.xx	0.25	x.xx	x.xx
DepHeadway:	xx.xx	5.75	xx.xx	xx.xx
ServiceTime:	xx.x	3.4	xx.x	xx.x
Delay:	xxx.x	10.4	xxx.x	xxx.x
Queue:	xxx.x	0.3	xxx.x	xxx.x

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	10.3	9.7	10.1	9.3
Delay Adj:	1.00	1.00	1.00	1.00

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

ApprAdjDel:	10.3	9.7	10.1	9.3
LOS by Appr:	B	A	B	A
OverallDel:			9.9	
OverallLOS:			A	

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report  
2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #21 Lake St / Orange Ave

\*\*\*\*\*

Cycle (sec): 0 Critical Vol./Cap.(X): 0.645  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 13.4  
Optimal Cycle: 0 Level Of Service: B  
\*\*\*\*\*

Street Name: Lake St Orange Ave

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 20 70 10 70 60 20 20 140 30 20 230 80

Growth Adj: 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13

Initial Bse: 23 79 11 79 68 23 23 158 34 23 259 90

Added Vol: 0 0 0 22 0 0 0 0 45 0 0 49 29

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 23 79 11 101 68 23 23 203 34 23 308 119

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 23 79 11 101 68 23 23 203 34 23 308 119

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 23 79 11 101 68 23 23 203 34 23 308 119

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 23 79 11 101 68 23 23 203 34 23 308 119

-----|-----|-----|-----|

Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.20 0.70 0.10 0.53 0.35 0.12 0.09 0.78 0.13 0.05 0.69 0.26

Final Sat.: 106 371 53 295 198 66 55 498 83 35 478 185

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.21 0.21 0.21 0.34 0.34 0.34 0.41 0.41 0.41 0.65 0.65 0.65

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

Delay/Veh: 10.3 10.3 10.3 11.5 11.5 11.5 11.6 11.6 11.6 16.0 16.0 16.0

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 10.3 10.3 10.3 11.5 11.5 11.5 11.6 11.6 11.6 16.0 16.0 16.0

LOS by Move: B B B B B B B B B C C C

ApproachDel: 10.3 11.5 11.6 16.0

Delay Adj: 1.00 1.00 1.00 1.00

ApprAdjDel: 10.3 11.5 11.6 16.0

LOS by Appr: B B B C

AllWayAvgQ: 0.2 0.2 0.2 0.4 0.4 0.4 0.6 0.6 0.6 1.6 1.6 1.6

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Detailed Computation Report  
2000 HCM 4-Way Stop Method  
Future Volume Alternative

\*\*\*\*\*  
Intersection #21 Lake St / Orange Ave  
\*\*\*\*\*

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period:	0.25 hour			
HevVeh:	0%	0%	0%	0%
Alpha Value:	0.01			

GroupType:	1	1	1	1
P[C1]:	0.16	0.19	0.21	0.35
P[C2]:	0.07	0.04	0.35	0.22
P[C3]:	0.36	0.43	0.14	0.24
P[C4]:	0.33	0.29	0.26	0.18
P[C5]:	0.07	0.04	0.04	0.02
Padj[C1]:	0.021	0.020	0.016	0.013
Padj[C2]:	0.012	0.011	0.004	0.005
Padj[C3]:	-0.006	-0.009	-0.001	-0.005
Padj[C4]:	-0.019	-0.017	-0.015	-0.011
Padj[C5]:	-0.007	-0.004	-0.004	-0.002

Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE

HeadwayAdj:	-0.020	0.035	-0.061	-0.149
Volume:	113	191	259	450
Capacity:	530	558	637	697
DegOfUtil:	0.19	0.31	0.38	0.63
DepHeadway:	5.98	5.87	5.34	5.01
ServiceTime:	4.0	3.9	3.3	3.0
Delay:	10.3	11.5	11.6	16.0
Queue:	0.2	0.4	0.6	1.6

Approach:	North Bound	South Bound	East Bound	West Bound
-----------	-------------	-------------	------------	------------

ApproachDel:	10.3	11.5	11.6	16.0
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	10.3	11.5	11.6	16.0
LOS by Appr:	B	B	B	C
OverallDel:			13.4	
OverallLOS:			B	

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #22 1st St / Orange Ave & Atlanta Ave  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.375  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 21.7  
Optimal Cycle: 30 Level Of Service: C  
\*\*\*\*\*

Street Name: 1st St Orange Ave & Atlanta Ave  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected  
Rights: Include Include Include Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Lanes: 0 1 0 0 1 1 0 0 0 0 1 0 1 0

Volume Module:  
Base Vol: 70 10 190 10 0 0 0 200 70 170 220 10  
Growth Adj: 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13 1.13  
Initial Bse: 79 11 214 11 0 0 0 225 79 192 248 11  
Added Vol: 55 0 27 0 0 0 0 21 45 20 24 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 134 11 241 11 0 0 0 246 124 212 272 11  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Volume: 134 11 241 11 0 0 0 246 124 212 272 11  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 134 11 241 11 0 0 0 246 124 212 272 11  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 134 11 241 11 0 0 0 246 124 212 272 11

Saturation Flow Module:  
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700  
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 0.92 0.08 1.00 1.00 0.00 0.00 1.00 1.33 0.67 1.00 0.96 0.04  
Final Sat.: 1568 132 1700 1700 0 0 1700 2262 1138 1700 1632 68

Capacity Analysis Module:  
Vol/Sat: 0.09 0.09 0.14 0.01 0.00 0.00 0.00 0.11 0.11 0.12 0.17 0.17  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.38 0.38 0.38 0.38 0.00 0.00 0.00 0.29 0.29 0.33 0.62 0.62  
Volume/Cap: 0.23 0.23 0.38 0.02 0.00 0.00 0.00 0.38 0.38 0.38 0.27 0.27  
Delay/Veh: 21.3 21.3 22.9 19.5 0.0 0.0 0.0 28.5 28.5 25.9 8.7 8.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 21.3 21.3 22.9 19.5 0.0 0.0 0.0 28.5 28.5 25.9 8.7 8.7  
LOS by Move: C C C B A A A C C C A A  
HCM2kAvgQ: 3 3 5 0 0 0 0 5 5 5 4 4

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*



Cumulative Conditions (2020 Mon Mar 30, 2009 18:37:04

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #23 Beach Blvd / Atlanta Ave

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.410  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 24.0  
Optimal Cycle: 32 Level Of Service: C  
\*\*\*\*\*

Street Name:	Beach Blvd				Atlanta Ave			
Approach:	North Bound		South Bound		East Bound		West Bound	
Movement:	L	T	R	L	T	R	L	T
Control:	Permitted		Permitted		Protected		Protected	
Rights:	Include		Include		Include		Include	
Min. Green:	0	0	0	0	0	0	0	0
Lanes:	0	1	2	1	0	1	0	2

Volume Module:	Beach Blvd				Atlanta Ave			
Base Vol:	80	840	100	270	500	70	80	280
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	90	947	113	304	563	79	90	316
Added Vol:	0	158	14	0	152	47	40	74
PasserByVol:	0	0	0	0	0	0	0	0
Initial Fut:	90	1105	127	304	715	126	130	390
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	90	1105	127	304	715	126	130	390
Reduct Vol:	0	0	0	0	0	0	0	0
Reduced Vol:	90	1105	127	304	715	126	130	390
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	90	1105	127	304	715	126	130	390

Saturation Flow Module:	Beach Blvd				Atlanta Ave			
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.27	3.35	0.38	1.00	2.55	0.45	1.00	2.00
Final Sat.:	464	5684	652	1700	4337	763	1700	3400

Capacity Analysis Module:	Beach Blvd				Atlanta Ave			
Vol/Sat:	0.19	0.19	0.19	0.18	0.16	0.16	0.08	0.11
Crit Moves:	****				****			
Green/Cycle:	0.47	0.47	0.47	0.47	0.47	0.47	0.19	0.38
Volume/Cap:	0.41	0.41	0.41	0.38	0.35	0.35	0.41	0.30
Delay/Veh:	20.7	20.7	20.7	20.5	20.0	20.0	43.8	25.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.7	20.7	20.7	20.5	20.0	20.0	43.8	25.9
LOS by Move:	C	C	C	C	B	B	D	C
HCM2kAvgQ:	8	8	8	7	6	6	4	5

Note: Queue reported is the number of cars per lane.

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Huntington Beach Traffic Impact Analysis  
Cumulative Conditions (Year 2020) without Project PM

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #24 Beach Blvd / Pacific View Ave  
\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.338  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 13.3  
Optimal Cycle: 34 Level Of Service: B  
\*\*\*\*\*

Street Name:	Beach Blvd				Pacific View Ave				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Protected		Protected		
Rights:	Include		Include		Include		Include		
Min. Green:	0	0	0	0	0	0	0	0	0
Lanes:	1	0	3	0	0	1	0	0	0

Volume Module:	Beach Blvd				Pacific View Ave							
Base Vol:	40	960	0	0	480	60	80	0	40	0	0	0
Growth Adj:	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Initial Bse:	45	1082	0	0	541	68	90	0	45	0	0	0
Added Vol:	0	71	0	0	74	93	100	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	45	1153	0	0	615	161	190	0	45	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	45	1153	0	0	615	161	190	0	45	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	45	1153	0	0	615	161	190	0	45	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	45	1153	0	0	615	161	190	0	45	0	0	0

Saturation Flow Module:	Beach Blvd				Pacific View Ave							
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	0.00	1.00	2.38	0.62	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1700	5100	0	1700	4044	1056	1700	0	1700	0	0	0

Capacity Analysis Module:	Beach Blvd				Pacific View Ave							
Vol/Sat:	0.03	0.23	0.00	0.00	0.15	0.15	0.11	0.00	0.03	0.00	0.00	0.00
Crit Moves:	****		****		****		****		****		****	
Green/Cycle:	0.10	0.67	0.00	0.00	0.57	0.57	0.33	0.00	0.33	0.00	0.00	0.00
Volume/Cap:	0.27	0.34	0.00	0.00	0.27	0.27	0.34	0.00	0.08	0.00	0.00	0.00
Delay/Veh:	50.9	8.6	0.0	0.0	13.2	13.2	30.6	0.0	27.6	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.9	8.6	0.0	0.0	13.2	13.2	30.6	0.0	27.6	0.0	0.0	0.0
LOS by Move:	D	A	A	A	B	B	C	A	C	A	A	A
HCM2kAvgQ:	2	6	0	0	5	5	5	0	1	0	0	0

Note: Queue reported is the number of cars per lane.